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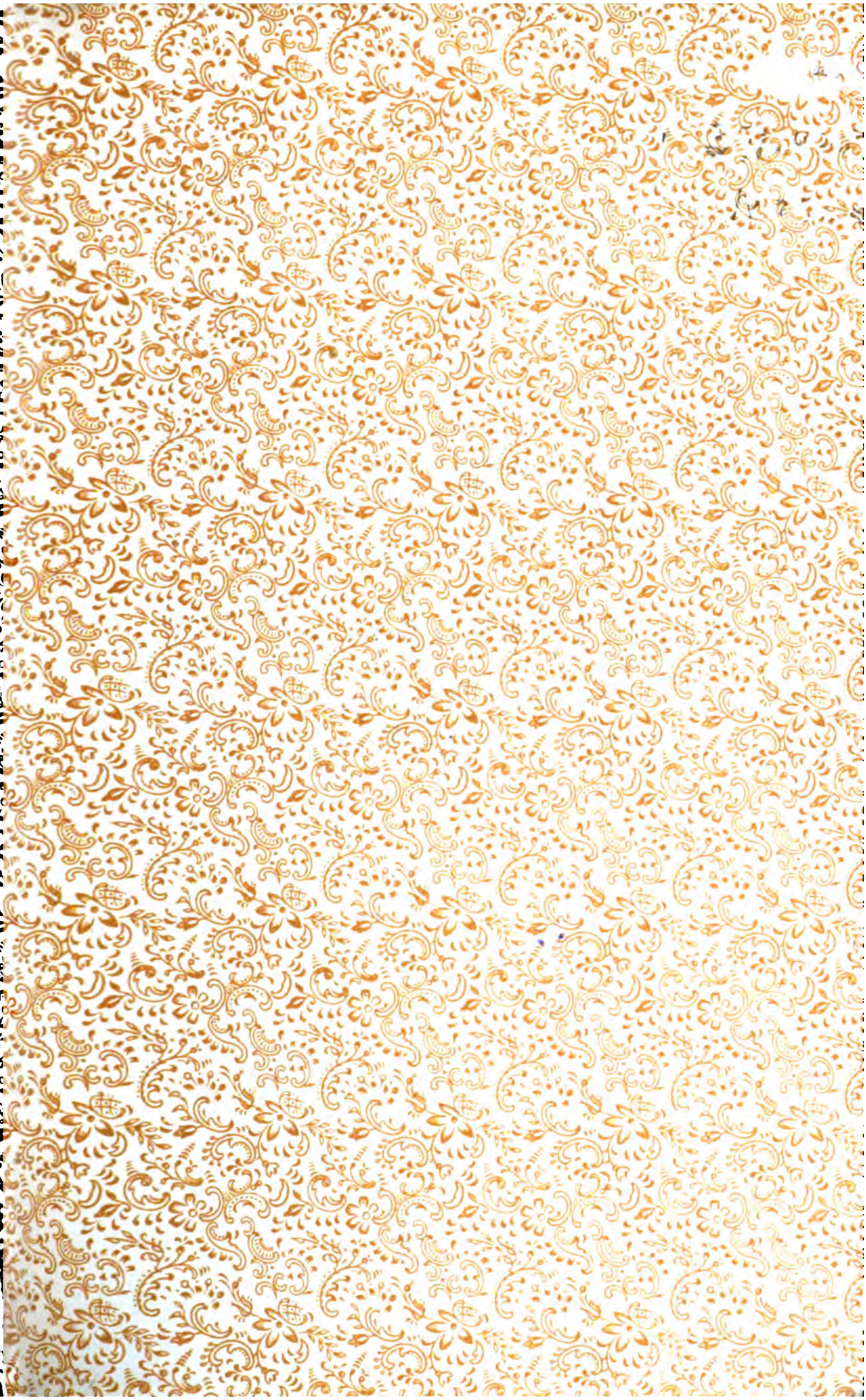

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THE NATIONAL ASSOCIATION OF CORPORATION SCHOOLS

THIRD ANNUAL CONVENTION

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WORCESTER, MASSACHUSETTS
JUNE 8-11, 1915

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FUNCTIONS

THE FUNCTIONS OF THE ASSOCIATION ARE THREEFOLD

1 TO DEVELOP THE EFFICIENCY OF THE INDIVIDUAL EMPLOYE

2 TO INCREASE EFFICIENCY IN INDUSTRY

3 TO INFLUENCE COURSES OF ESTABLISHED EDUCATIONAL INSTITUTIONS MORE FAVORABLY TOWARD INDUSTRY

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Whipple, T. H. B.	Westinghouse Electric & Manufacturing Company	East Pittsburg, Pennsylvania
Wiley, W. O.	John Wiley & Sons, Publishers	New York, New York
Wilkes, F. A.	Commercial High School	Framingham, Massachusetts
Willard, F. H.	The Graton & Knight Manufacturing Company	Worcester, Massachusetts
Williams, H. H.	George E Keith Company	Brockton, Massachusetts
Williams, R. G.	Norton Company	Worcester, Massachusetts
Williams, W. S.	American Steel & Wire Company	Cleveland, Ohio
Wilson, P. H.	The Graton & Knight Manufacturing Company	Worcester, Massachusetts
Wolf, E. C.	The Curtis Publishing Company	Philadelphia, Pennsylvania
Woods, Miss H. A.	Worcester Friends Society	Worcester, Massachusetts
Young, Miss B. M.	Retail Credit Company	Atlanta, Georgia

OFFICERS

President
JOHN McLEOD
Carnegie Steel Company

First Vice-President
HERBERT J. TILY
Strawbridge & Clothier

Second Vice-President
HARRY TIPPER
The Texas Company

Secretary
LEE GALLOWAY
New York University

Treasurer
GEORGE B EVERITT
National Cloak & Suit Company

Executive Secretary
F. C. HENDERSCHOTT
The New York Edison Company

Executive Committee
A. F. BARDWELL,
The Yale & Towne Manufacturing Company

J. W. L. HALE,
The Pennsylvania Railroad Company

M. W. MIX,
Dodge Manufacturing Company

E. M. HOPKINS,
The Curtis Publishing Company

WILLIAM D. KELLEY,
Consolidated Gas Company of New York

C. R. DOOLEY,
Westinghouse Electric & Manufacturing Company

L. L. PARK,
American Locomotive Company

R. H. GRANT,
The National Cash Register Company

F. C. HENDERSCHOTT,
The New York Edison Company

POLICY AND FINANCE COMMITTEE

Arthur Williams, *Chairman.*
F. C. Henderschott, *Secretary.*

George I. Alden, President, Norton & Norton Grinding Companies, Worcester, Massachusetts.

A. A. Anderson, Secretary, Educational Committee American Museum of Safety, 80 West 40th Street, New York City.

N. F. Brady, President, The New York Edison Company, 54 Wall Street, New York City.

Chancellor E. E. Brown, New York University, Washington Square East, New York City.

George B. Cortelyou, President, Consolidated Gas Company of New York, 130 East 15th Street, New York City.

T. E. Donnelley, President, R. R. Donnelley & Sons Company, Plymouth Place, corner Polk, Chicago, Illinois.

Dr. John Finley, Commissioner of Education of New York State, Albany, New York.

Dr. Arthur A. Hamerschlag, Director, Carnegie Institute of Technology, Pittsburgh, Pennsylvania.

William R. Heath, Vice-President, Larkin Company, Buffalo, New York.

Clarence H. Howard, President, Commonwealth Steel Company, St. Louis, Missouri.

Dr. John Price Jackson, Commissioner of Labor and Industry, Harrisburg, Pennsylvania.

N. C. Kingsbury, Vice-President, American Telephone & Telegraph Company, 15 Dey Street, New York City.

C. H. Ludington, Secretary and Treasurer, The Curtis Publishing Company, Independence Square, Philadelphia, Pennsylvania.

John McLeod, Assistant to the President, Carnegie Steel Company, Pittsburgh, Pennsylvania.

M. W. Mix, President, Dodge Manufacturing Company, Mishawaka, Indiana.

Dr. Hugo Munsterberg, Harvard University, Cambridge, Massachusetts.

John H. Patterson, President, The National Cash Register Company, Dayton, Ohio.

James A. Roosevelt, Roosevelt & Thompson, 71 Broadway, New York City.

Dr. Charles P. Steinmetz, General Electric Company, Schenectady, New York.

Herbert J. Tily, General Manager, Strawbridge & Clothier, Philadelphia, Pennsylvania.

COMMITTEE ON TRADE APPRENTICESHIP SCHOOLS

J. W. L. Hale, *Chairman*

W. L. Chandler
J. M. Larkin
F. W. Thomas
P. V. Farnsworth
T. G. Gray

COMMITTEE ON SPECIAL TRAINING SCHOOLS

J. W. Dietz, *Chairman*

J. E. Banks
T. E. Donnelley
Fred R. Jenkins
W. K. Page

COMMITTEE ON ADVERTISING, SELLING AND DISTRIBUTION SCHOOLS

Dr. Lee Galloway, *Chairman*

Professor M. T. Copeland
Frank L. Glynn
F. E. Van Buskirk
O. B. Carsan
J. T. Spicer
W. W. Kincaid

COMMITTEE ON RETAIL SALESMANSHIP

James W. Fisk, *Chairman*

Miss Beulah Kennard
H. G. Petermann
Mrs. Lucinda Prince
Miss Lilian Meyncke
Ralph W. Kinsey

COMMITTEE ON ACCOUNTING AND OFFICE WORK SCHOOLS

George B. Everitt, *Chairman*

Dr. Louis I. Dublin
R. H. Puffer
H. A. Hopf
Frederick Uhl
Wm. R. DeField

COMMITTEE ON SAFETY AND HEALTH

Sydney W. Ashe, *Chairman*

L. H. Burnett
Arthur T. Morey
J. C. Robinson
C. B. Auel

COMMITTEE ON ALLIED INSTITUTIONS

James A. Roosevelt, *Chairman*

Norman Collyer
R. L. Cooley

COMMITTEE ON EMPLOYMENT PLANS

F. P. Pitzer, *Chairman*

N. F. Dougherty
Philip J. Reilly
Edward B. Saunders
W. M. Skiff

COMMITTEE ON PUBLIC EDUCATION

E. H. Fish, *Chairman*

E. G. Allen
Arthur E. Corbin
Arthur W. Earle
Miss Harriet Fox

COMMITTEE ON VOCATIONAL GUIDANCE

Dr. Henry C. Metcalf, *Chairman*

C. R. Sturdevant
Albert C. Vinal

COMMITTEE ON CODIFICATION

Harry Tipper, *Chairman*

T. M. Ambler
A. Blumenthal
E. M. Henderson
K. W. Waterson

COMMITTEE ON NOMINATIONS

John L. Conover, *Chairman*

N. F. Dougherty
H. W. Dunbar
L. W. George
A. W. Soderberg

COMMITTEE ON RESOLUTIONS

C. E. Shaw, *Chairman*

Sydney W. Ashe
F. W. Atkin

COMMITTEE ON MEMBERSHIP

John McLeod, *Chairman*
F. C. Henderschott, *Secretary*

Note: There will be no regular membership committee appointed other than Chairman and Secretary, but all members of the Association will be asked to coöperate in securing new memberships.

MEMBERSHIP

OF

THE NATIONAL ASSOCIATION OF CORPORATION SCHOOLS

Class A Members

Addressograph Company..................................W. K. Page
901-911 West Van Buren Street, Chicago, Illinois
American Bridge Company................................J. E. Banks
Pittsburgh, Pennsylvania
American Locomotive Company..........................L. L. Park
Schenectady, New York
American Steel & Wire Company............Charles R. Sturdevant
Worcester, Massachusetts
American Telephone & Telegraph Company........K. W. Waterson
15 Dey Street, New York City
The Atchison, Topeka & Santa Fe Railway..........F. W. Thomas
Railway Exchange, 80 East Jackson Boulevard, Chicago, Illinois
Bing & Bing Construction Company, Inc............A. Blumenthal
119 West 40th Street, New York City
Brighton Mills ....H. V. R. Scheel
Passaic, New Jersey
The Brooklyn Union Gas Company...................T. M. Ambler
180 Remsen Street, Brooklyn, New York
Burroughs Adding Machine Company..................F. H. Dodge
Detroit, Michigan
Cadillac Motor Car Company.........................Henry M. Leland
1343 Case Avenue, Detroit, Michigan
Carnegie Steel Company..............................John McLeod
Pittsburgh, Pennsylvania
Commonwealth Edison Company.......................F. R. Jenkins
72 West Adams Street, Chicago, Illinois
Commonwealth Steel Company....................Arthur T. Morey
St. Louis, Missouri
Consolidated Gas Company of New York........William D. Kelley
4 Irving Place, New York City
The Curtis Publishing Company.....................E. M. Hopkins
Independence Square, Philadelphia, Pennsylvania
The Dayton Engineering Laboratories Company.......J. J. Munsell
Dayton, Ohio
Dennison Manufacturing Company......................C. E. Shaw
Framingham, Massachusetts

Dives, Pomeroy & Stewart	Ralph W Kinsey	Reading, Pennsylvania
Dodge Manufacturing Company	M. W. Mix	Mishawaka, Indiana
Henry L. Doherty & Company	R. G. Griswold	60 Wall Street, New York City
R. R. Donnelley & Sons Company	T. E. Donnelley	Plymouth Place corner Polk, Chicago, Illinois
Equitable Life Assurance Society	F. P. Pitzer	165 Broadway, New York City
Fore River Shipbuilding Corporation	Joseph M. Larkin	Quincy, Massachusetts
General Electric Company	Dr. C. P. Steinmetz	Schenectady, New York
The Goodyear Tire & Rubber Company	C. R. Johnson	Akron, Ohio
Haines, Jones & Cadbury Company	J. H. Borton	1130 Ridge Avenue, Philadelphia, Pennsylvania
Illinois Steel Company	T. W. Robinson	208 South La Salle Street, Chicago, Illinois
Larkin Company	William R. Heath	Buffalo, New York
Thomas Maddock's Sons Company	J. T. Spicer	Trenton, New Jersey
The Manhattan Rubber Manufacturing Company	E. M. Henderson	Passaic, New Jersey
Metropolitan Life Insurance Company	Dr. L. I. Dublin	1 Madison Avenue, New York City
The Midvale Steel Company	R. B. Lindsay	Philadelphia, Pennsylvania
Montgomery Ward & Company	William R. DeField	Chicago, Illinois
The National Cash Register Company	R. H. Grant	Dayton, Ohio
National Cloak & Suit Company	George B. Everitt	203-217 West 24th Street, New York City
National Tube Company	Taylor Allderdice	Pittsburgh, Pennsylvania
The New York Edison Company	Arthur Williams	130 East 15th Street, New York City
Norton Company & Norton Grinding Company	E. H. Fish	Worcester, Massachusetts
Oregon Short Line Railroad	L. E. Abbott	Salt Lake City, Utah
Otis Elevator Company	R. S. Baldwin	Eleventh Avenue & Twenty-sixth Street, New York City
The Packard Motor Car Company	Arthur E. Corbin	Detroit, Michigan

The Pennsylvania Railroad Company................J. W. L. Hale
Altoona, Pennsylvania
Phoenix Mutual Life Insurance Company...............H. A. Hopf
Hartford, Connecticut
Public Service Corporation of New Jersey..........J. L. Conover, Jr.
Newark, New Jersey
Remington Arms-Union Metallic Cartridge Company....F. B. Clark
299 Broadway, New York City
Remington Typewriter Company...................F. E. Van Buskirk
327 Broadway, New York City
The Rike-Kumler Company...................Miss Lilian Meyncke
Dayton, Ohio
The H. M. Rowe Company..............................H. M. Rowe
Harlem Square, Baltimore, Maryland
Simonds Manufacturing Company..................E. B. Saunders
Fitchburg, Massachusetts
Southern Pacific Company...........................Norman Collyer
San Francisco, California
The Spirella Company.................................W. W. Kincaid
Gluck Building, Niagara Falls, New York
State Trade Shops of Connecticut....................F. J. Trinder
New Britain, Connecticut
Strawbridge & Clothier.............................Herbert J. Tily
Market Street, Philadelphia, Pennsylvania
Swift & Company..E. L. Ward
Union Stock Yards, Chicago, Illinois
The Texas Company...H. Tipper
17 Battery Place, New York City
The Travelers Insurance Company...............L. N. Denniston
Hartford, Connecticut
The Trow Press......................................T. B. Sheehan
201 East 12th Street, New York City
United Cigar Stores Company.....................H. G. Petermann
44 West 18th Street, New York City
United States Cast Iron Pipe & Foundry Company..N. F. S. Russell
Burlington, New Jersey
The Warner and Swasey Company......................K. W. Reed
Cleveland, Ohio
Western Electric Company..............................J. W. Dietz
Hawthorne Station, Chicago, Illinois
Westinghouse Electric & Manufacturing Company......C. R. Dooley
East, Pittsburg, Pennsylvania
The Westinghouse Machine Company....................R. F. Carey
East Pittsburg, Pennsylvania
The Willys-Overland Company........................W. M. Taylor
Toledo, Ohio
The Yale & Towne Manufacturing Company..........A. F. Bardwell
Stamford, Connecticut

Class B Members

George I. Alden..........Norton Company & Norton Grinding Company
Worcester, Massachusetts
Sydney W. Ashe............................General Electric Company
Pittsfield, Massachusetts
F. W. Atkin.....................The National Cash Register Company
Dayton, Ohio
J. H. Barringer.................The National Cash Register Company
Dayton, Ohio
W. E. Best.......................The National Cash Register Company
Dayton, Ohio
W. F. Bippus...................The National Cash Register Company
Dayton, Ohio
Alice M. Blaine.......................The Curtis Publishing Company
Independence Square, Philadelphia, Pennsylvania
William A. Blum.................The National Cash Register Company
Dayton, Ohio
F. N. Bolles..........................The New York Edison Company
Irving Place and Fifteenth Street, New York City
F. J. Brownscombe.....................National Cloak & Suit Company
203 West 24th Street, New York City
L. H. Burnett...............................Carnegie Steel Company
1127 Carnegie Building, Pittsburgh, Pennsylvania
Benjamin Cadbury................Haines, Jones & Cadbury Company
1136 Ridge Avenue, Philadelphia, Pennsylvania
J. M. Camp..................................Carnegie Steel Company
1127 Carnegie Building, Pittsburgh, Pennsylvania
W. L. Chandler.....................Dodge Manufacturing Company
Mishawaka, Indiana
A. W. Clark................................General Electric Company
Schenectady, New York
F. O. Clements.................The National Cash Register Company
Dayton, Ohio
O. Coolican.....................The National Cash Register Company
Dayton, Ohio
Mrs. L. R. deCravioto................The New York Edison Company
Irving Place and Fifteenth Street, New York City
E. A. Deeds.................Dayton Engineering Laboratories Company
Dayton, Ohio
Frederick L. Devereux....American Telephone & Telegraph Company
15 Dey Street, New York City
Arthur Dilks.................The National Cash Register Company
Dayton, Ohio
N. F. Dougherty.................The Pennsylvania Railroad Company
Pittsburgh, Pennsylvania
Miss Florence Dressler............The New York Edison Company
Irving Place and Fifteenth Street, New York City

H. W. DUNBAR..........Norton Company, Norton Grinding Company
Worcester, Massachusetts
J. B. ENNIS............................American Locomotive Company
30 Church Street, New York City
J. Q. FINFROCK..................The National Cash Register Company
Dayton, Ohio
MISS HARRIET R. FOX.........................Strawbridge & Clothier
Market, Eighth and Filbert Streets, Philadelphia, Pennsylvania
W. H. FRYER.....................The National Cash Register Company
Dayton, Ohio
J. J. GARVEY..................................Western Electric Company
Hawthorne Station, Chicago, Illinois
R. C. GLASS.....................The National Cash Register Company
Dayton, Ohio
E. G. GRANDSTAFF...................The New York Edison Company
Irving Place and Fifteenth Street, New York City
T. G. GRAY...............................Southern Pacific Company
Sacramento, California
D. R. HALL........................The National Cash Register Company
Dayton, Ohio
WILLIAM HARTMAN.............The National Cash Register Company
Dayton, Ohio
R. B. HARVEY..........Westinghouse Electric & Manufacturing Company
East Pittsburg, Pennsylvania
F. C. HENDERSCHOTT.................The New York Edison Company
Irving Place and Fifteenth Street, New York City
J. P. HENRY.............The National Cash Register Company
Dayton, Ohio
MISS KATHARINE HUEY................The Curtis Publishing Company
Independence Square, Philadelphia, Pennsylvania
M. B. HUGHES..........................Cadillac Motor Car Company
Detroit, Michigan
H. J. HUNT.....................The National Cash Register Company
Dayton, Ohio
P. E. ILLMAN...................The National Cash Register Company
Dayton, Ohio
R. D. JACKSON..................The National Cash Register Company
Dayton, Ohio
JOHN F. KELLY.....................The New York Edison Company
Irving Place and Fifteenth Street, New York City
EMIL KORTHAUS...................The Brooklyn Union Gas Company
176 Remsen Street, Brooklyn, New York
E. M. KUHNS....................The National Cash Register Company
Dayton, Ohio
L. A. LARSEN..........................American Locomotive Company
30 Church Street, New York City
G. N. LINGHAM.................The National Cash Register Company
Dayton, Ohio

F. B. Patterson................The National Cash Register Company
Dayton, Ohio

John H. Patterson.............The National Cash Register Company
Dayton, Ohio

G. H. Pfeif................................General Electric Company
Schenectady, New York

R. H. Puffer..Larkin Company
Buffalo, New York

Charles R. Robbins..Westinghouse Electric & Manufacturing Company
East Pittsburg, Pennsylvania

F. R. Robinson.....................The Packard Motor Car Company
Detroit, Michigan

J. C. Robinson........................The New York Edison Company
Irving Place and Fifteenth Street, New York City

A. L. Rohrer ....General Electric Company
Schenectady, New York

R. C. Routsong..................The National Cash Register Company
Dayton, Ohio

F. P. Sager.....................The National Cash Register Company
Dayton, Ohio

E. D. Shaw......................Burroughs Adding Machine Company
Detroit, Michigan

W. M. Skiff...............................General Electric Company
National Lamp Works, Nela Park, Cleveland, Ohio

A. W. Soderberg.............................Carnegie Steel Company
Homestead Steel Works, Munhall, Pennsylvania

J. M. Switzer......... ....The National Cash Register Company
Dayton, Ohio

Frederick Uhl..........American Telephone & Telegraph Company
24 Walker Street, New York City

G. N. Van Derhoef....................Dodge Manufacturing Company
21 Murray Street, New York City

Albert C. Vinal............American Telephone & Telegraph Company
15 Dey Street, New York City

J. C. Walker....................Burroughs Adding Machine Company
Detroit, Michigan

W. D. Walker.....................The Packard Motor Car Company
Detroit, Michigan

R. E. Webster.............................Western Electric Company
New York, New York

K. Weisiger...........Southern Bell Telephone & Telegraph Company
Atlanta, Georgia

John H. Weller.........................Packard Motor Car Company
Detroit, Michigan

T. H. B. Whipple......Westinghouse Electric & Manufacturing Company
East Pittsburg, Pennsylvania

E. C. Wolf.................................The Dyer Film Company
Room 859 Fifth Avenue Building, New York City
J. H. Yoder........................The Pennsylvania Railroad Company
3710 Baring Street, Philadelphia, Pennsylvania

Class C Members

E. G. Allen..............................Cass Technical High School
Detroit, Michigan
S. A. Aloe..............................A. B. Kirschbaum Company
Philadelphia, Pennsylvania
F. H. Ball................................Director Industrial Education
716 Fulton Building, Pittsburg, Pennsylvania
G. M. Basford................................Joseph T. Ryerson & Son
30 Church Street, New York City
W. T. Bawden.....................United States Bureau of Education
Washington, District of Columbia
Jesse Beery...........Beery Correspondence School of Horsemanship
Pleasant Hill, Ohio
H. G. Benedict,
927 North County Street, Waukegan, Illinois
Joseph W. Broadbent.....................Funk & Wagnalls Company
354 Fourth Avenue, New York City
R. L. Cooley....................................Continuation Schools
Milwaukee, Wisconsin
Miss Mary E. Eastwood............The William Penn High School
3714 Hamilton Street, Philadelphia, Pennsylvania
Miss Caroline Eichbauer..The New York Board of Fire Underwriters
76 William Street, New York City
E. H. Eldridge.......................................Simmons College
Boston, Massachusetts
J. W. Fisk....................................J. L. Hudson Company
Detroit, Michigan
A. P. Fleming
The British Westinghouse Electric & Manufacturing Company, Ltd.
Trafford Park, Manchester, England
R. J. Foster....................International Correspondence Schools
Scranton, Pennsylvania
H. F. Fox.......................United States Brewers' Association
50 Union Square, New York City
Dr. Lee Galloway...........................New York University
Washington Square East, New York City
F. A. Geier.......................Cincinnati Milling Machine Company
Cincinnati, Ohio
P. L. Gerety............................Sidney Blumenthal Company
Shelton, Connecticut
Frank L. Glynn..........................Boardman Apprentice Shops
New Haven, Connecticut

Walt S. Goodwin,
32 American Building, New York City
L. Greendlinger..........................Alexander Hamilton Institute
13 Astor Place, New York City
J. L. Halley,
1098 Elmore Place, Brooklyn, New York
O. C. Harn.....................................National Lead Company
111 Broadway, New York City
Clarence J. Hicks......International Harvester Company of New Jersey
Harvester Building, Michigan Avenue & Harrison Street, Chicago, Illinois
H. A. Holmes,
Hotel Brown, Des Moines, Iowa
C. A. S. Howlett......................Diehl Manufacturing Company
Elizabeth, New Jersey
G. Pryor Irwin.................................Dry Goods Economist
239 West 39th Street, New York City
F. T. Joy...E. A. Mallory & Sons
Danbury, Connecticut
W. Irving Lake....................................The Sheldon School
Republic Building, 209 State Street, Chicago, Illinois
E. St. Elmo Lewis..................Art Metal Construction Company
700 Lakeview Avenue, Jamestown, New York
H. F. Lewis,
155 North Munn Avenue, East Orange, New Jersey
W. C. Locker.....................John Marshall Night High School
805 East Marshall Street, Richmond, Virginia
H. S. McCormack...............................The Business Bourse
261 Broadway, New York City
Dr. C. R. Mann..Carnegie Foundation for the Advancement of Teaching
576 Fifth Avenue, New York City
Constant Meese.........................Meese & Gottfried Company
San Francisco, California
E. J. Mehren...........................McGraw Publishing Company
239 West 39th Street, New York City
Dr. Henry C. Metcalf.................................Tufts College
Tufts College, Massachusetts
E. R. Murphey..........................James H. Rhodes & Company
162 West Kinzie Street, Chicago, Illinois
Willis K. Nash..Nash Brothers
928 Plymouth Building, Minneapolis, Minnesota
Homer S. Pace..Pace & Pace
30 Church Street, New York City
A. N. Palmer...............................A N. Palmer Company
30 Irving Place, New York City
F. J. Raymond,
38 North Burnett Street, East Orange, New Jersey
C. B. Robertson...............................University of Pittsburg
3301 Iowa Street, Pittsburg, Pennsylvania

James A. Roosevelt............................Roosevelt & Thompson
71 Broadway, New York City
Walter B. Russell........Franklin Union Industrial School for Men
Boston, Massachusetts
J. William Schulze......................Robert H. Ingersoll & Brother
315 Fourth Avenue, New York City
Walter Dill Scott..........................Northwestern University
Evanston, Illinois
E. L. Shuey.............................The Lowe Brothers Company
Dayton, Ohio
E. O. Smith.........Newport News Shipbuilding & Dry Dock Company
Newport News, Virginia
G. L. Sprague,
The Stout Institute & Wisconsin State Board of Industrial Education
Menomonie, Wisconsin
A. A. Thomas...................The National Cash Register Company
1110 U B Building, Dayton, Ohio
P. J. Warner............................The Ronald Press Company
21 Vesey Street, New York City
J. C. Whitman............California State Civil Service Commission
Sacramento, California
C. L. Woodfield.................Chicago Typothetae School of Printing
536 South Clark Street, Chicago, Illinois
R. V. Wright..................................Railway Age Gazette
Woolworth Building, New York City

CONSTITUTION
OF
THE NATIONAL ASSOCIATION OF CORPORATION SCHOOLS

ARTICLE I

NAME

The name of this organization is The National Association of Corporation Schools.

ARTICLE II

OBJECT

Section 1.—The object is to aid corporations in the education of their employes.

(1) By providing a forum for the interchange of ideas.

(2) By collecting, and making available, data as to successful and unsuccessful plans in educating employes.

ARTICLE III

MEMBERSHIP

Section 1.—Members shall be divided into three Classes: Class A (Company Members), Class B (Members), Class C (Associate Members).

Section 2.—Class A members shall be commercial, industrial, transportation or governmental organizations, whether under corporation, firm or individual ownership, which now are or may be interested in the education of their employes. They shall be entitled, through their properly accredited representative, to attend all meetings of the Association, to vote and to hold office.

Section 3.—Class B members shall be officers, managers or instructors of schools conducted by corporations who are Class A members. They shall be entitled to hold office and to attend all general meetings of the Association.

Section 4. Class C members shall be those not eligible for membership in Class A or Class B who are in sympathy with the objects of the Association. They shall be entitled to attend all general meetings of the Association.

ARTICLE IV

OFFICERS

Section 1.—The officers shall be a President, a First and Second Vice-President, an Executive Committee, a Secretary, and a Treasurer.

Section 2.—The President and Vice-Presidents shall be elected from Class A or Class B members to serve one year or until their successors shall have been elected. The President shall be ineligible to re-election for two years after his term has expired. The President shall preside at all meetings of the Association and of the Executive Committee, and shall perform such other duties as may be provided for in this Constitution or by vote of the Association. In case of the absence, disability or death of the President, his office shall be filled by the Senior Vice-President.

Section 3.—The Executive Committee shall consist of a President, First and Second Vice-Presidents and nine members, six of whom shall be elected from Class A and three from Class B. Two Class A members and one Class B member shall be chosen at each annual meeting except the first, and shall hold office for three years or until their successors are elected. At the first meeting of the Association nine members shall be elected, six from Class A and three from Class B. Two Class A and one Class B to serve for one year; two Class A and one Class B to serve two years; two Class A and one Class B to serve for three years.

Section 4.—The Executive Committee shall be the governing body of the Association, subject to this Constitution and such special rules or regulations as may be adopted by the Association from time to time, and shall manage its affairs, pass upon all applications for membership and upon the eligibility of representatives. Five members of the Committee shall constitute a quorum.

Section 5.—The Secretary shall be appointed by the Executive Committee. He shall serve for one year or until his successor is appointed. He may be a member of any class, shall be eligible for reappointment without limit and shall perform such duties as the Executive Committee may direct.

Section 6.—The Treasurer shall be appointed in the same manner as the Secretary, shall serve for a like term, and shall perform the duties assigned to him by the Executive Committee, subject to its approval. He shall give a security bond for such sum and with such qualifications as the Executive Committee may from time to time determine. The offices of the Secretary and Treasurer may be filled by the same person.

ARTICLE V

MEETINGS

Section 1.—The annual meeting shall be held during the month of June of each year, and in such places and on such dates as the Executive Committee may determine.

ARTICLE VI

QUORUM

Fifteen Class A members shall constitute a quorum for the transaction of business.

ARTICLE VII

DUES

Section 1.—The annual dues of Class A members shall be $50.00.

Section 2.—The annual dues of Class B members shall be $5.00, and the annual dues of Class C members shall be $10.00.

Section 3.—All dues shall be payable in advance and shall cover the calendar year. Any members in arrears for three months shall be dropped by the Executive Committee, unless in its judgment sufficient reasons exist for continuing members on the roll.

ARTICLE VIII.

ELECTION OF OFFICERS

Section 1.—At a meeting limited to Class A members held at the time of the Annual Meeting, there shall be elected from representatives of Class A members a Nominating Committee of five members. Said Nominating Committee shall make its report to the Association through the Secretary not later than thirty days preceding the election. Within two days notification of the nominations shall be made in a circular to all Class A members.

Section 2.—The submission of names by the Nominating Committee shall not debar any accredited representative of a Class A member from making nominations for any or all of the officers, which nominations, if seconded, shall be submitted for election at the same time and in the same manner as those of the Nominating Committee.

Section 3.—Whenever there are more nominees than vacancies, the election shall be by ballot. Otherwise the Secretary shall be instructed by viva voce vote to cast the ballot for the nominees.

Section 4.—Vacancies in office may be filled by the Executive Committee until the next Annual Meeting of the Association.

ARTICLE IX

PERMANENT OFFICE

The office of the Association shall be located at a place to be determined by the Executive Committee.

ARTICLE X

PARLIAMENTARY RULES

Robert's "Rules of Order" shall govern in all cases not definitely provided for in this Constitution or in rules or By-laws of the Association.

ARTICLE XI

AMENDMENTS

Section 1.—Amendments to this Constitution shall be offered in writing and must be signed by the accredited delegates of not less than five member companies. Amendments so signed must be in the hands of the Secretary of the Association not less than forty days in advance of the Annual Meeting. Notice of the proposed amendment or amendments shall be mailed to the members not less than thirty days before the Annual Meeting.

Section 2.—A two-thirds vote of all Class A members present at an Annual Meeting shall be necessary for the adoption of any amendment.

OPENING SESSION

PRESIDENT
CHARLES P. STEINMETZ
PRESIDING

TUESDAY MORNING

OPENING SESSION

TUESDAY MORNING, JUNE 8, 1915

PRESIDENT CHARLES P. STEINMETZ, Presiding

Ladies and Gentlemen: I hereby call to order this Third Annual Convention of The National Association of Corporation Schools and ask Mr. George I. Alden, President of the Norton Companies to say a few words of welcome.

ADDRESS OF WELCOME

GEORGE I. ALDEN, President of the Norton Companies

Mr. President, Members and Guests of The National Association of Corporation Schools, Ladies and Gentlemen: I presume an address of welcome on an occasion like this is generally regarded as one of the necessary formalities incident to getting the machinery of the Convention started. I am not aware that any authority has fixed the number or character of the subjects that may properly be introduced into an address of this sort. So the speaker has the advantage of a wide choice in his selection of material. In the exercise of this choice I will say, and with emphasis, that privileged as I am to stand here representing the local members of this association, The American Steel & Wire Company and the Norton Companies, and to extend to you their welcome, I seriously object to this welcome being considered a formality. I want it to be a reality. We hope to be able to convince you during your stay in Worcester of the sincerity of our welcome, and the genuineness of our hospitality. We believe we can make your visit here at least comfortable. We hope enjoyable. We aspire to make it even memorable.

We are well aware that we entertain distinguished guests. I am not claiming to have made here a discovery. One only needs to glance over the list of the officers and members of this Association, beginning with your honored President, Dr. Steinmetz, known the world over as a great mathematician and scientist, to be impressed with the high character of the visiting representatives of this Association. Therefore we expect to receive much from you. As we meet you in the daily sessions of the Convention, touch elbows at the round table discussions, or sit with you in the banquet hall, we cannot fail to receive from you, through that subtle process by which we recognize and appropriate the virtues of the good and the great, spiritual stimulus and inspiration which will benefit and uplift our lives.

But most important of all, I congratulate you that you have met for a season of real work. You have the problem of inspiring, guiding, sustaining this organized movement in behalf of Corporation Schools. I am sure the matter is safe in your hands. In the wisdom that results from comparing data and ideas on the subject, you will carry on the work already so successfully begun.

But again exercising my privilege (which perhaps I have assumed rather than received), I desire to give expression to one of the ideals I have for Corporation Schools and their ultimate influence. I want to see the Corporation, as an institution, perfected. It has accomplished so much already, its success is so necessary to the welfare of every American citizen, that I want to see it freed from every stigma, either real or imaginary, that has come upon it. I believe that a corporation managed in the interests of truth and humanity, as well as of good business practice, is the most beneficent institution, outside the church and family, that has ever existed.

In its most perfect form, it has so many sane, healthful human and humane characteristics. It has discipline without harshness; efficiency without hardship; diversified talent without caste; financial blessings without humiliation; competition without bitterness; financial success without jealousy. The corporations of this country, whatever their sins or failings, have built up the happy villages as well as the larger towns and cities, have supplied the country with its transportation systems, and have been the direct instruments in placing the country in the foremost rank of manufacturing and commercial nations.

Notwithstanding all this, the corporations have lost in the mind of the public, and to a degree rightly so much of their former prestige and respect. We want to remove the cause of this decline in the minds of the people; keep the good and eliminate the bad elements; search out the hidden faults which have weakened some of the great corporations and discredited all of them, and correct these faults. Apply the remedy right at the point where the wrong begins. We want special reforms for special wrongs, applied to special individual corporations, and also the emphasizing of the general principles of truth, righteousness, and humanity, which any corporation must adopt to be permanent or useful. We want a recognized code of business ethics, which, without the aid of state or national laws, will read out of the circle of good standing, those that violate the code.

As a help to the accomplishment of all these things, I make but one suggestion,—unify each corporation. In this work the Corporation School seems to me to have great possibilities. The Corporation is not essentially a unit, until all connected with it feel the beneficent influence of its management, believe in its fairness and honesty, and see it for their own interests, as well as for the success of the whole organization, to be loyal and helpful, realizing that in working for the interests of the Corporation they are also working for their own interests.

What single instrumentality can be better used to bring about this unity in the Corporation, than the Corporation School, when such school is organized and directed with this end in view? It mav reach by instruction and guidance, the operatives of every department. It should command the services of a man qualified not only to teach science or trade, or department practice, but to represent and disseminate the ideals and the truths upon which correct mutual relations of all parties in any way interested in the Corporation, depend. This then is one ideal I suggest for Corporation Schools to work toward,—the perfection of the Corporation as an institution by making the individual corporations more complete harmonious units, in a manner that reaches and encourages every individual in any way connected with the corporation. Only in such unity is there the maximum of strength and usefulness.

Worcester is preeminently a city of corporations and schools. Rather than trespass upon your time to speak of these or other institutions of our city, I have provided for your convenience while here, a pocket guide which may also serve as a souvenir of your visit.

I close by again extending in behalf of your hosts, their cordial welcome.

President Steinmetz: Ladies and gentlemen, it is my pleasure and honor now to introduce to you the Honorable Mr. Lincoln, who represents the fair city of Worcester and our host.

Mr. Lincoln confessed to me just before the meeting that in one particular the arrangements which had been made had gone astray, since he was not able to provide the fair and sunny weather it has always been customary for the City of Worcester to provide for conventions. (Laughter.) But I suspect he has felt that our Convention has come together for business and not to enjoy the possibilities of the weather. I ask Mr. Lincoln to address you.

ADDRESS

Mr. Daniel W. Lincoln

Representative for the Mayor of Worcester

Mr. Chairman, Delegates to the Third Annual Convention of The National Association of Corporation Schools, and invited guests: It is with some trepidation and considerable diffidence that I venture to extend in behalf of the Mayor, the City Government and, through them, of the Citizens of Worcester, a cordial welcome to this convention of delegates of Corporation Schools on your third annual meeting.

While, because of the newness of the movement, the splendid work which you are doing is unfortunately too little known to the general public, yet the inevitable result of this gathering must be the spreading of our acquaintance with this most important subject.

For us in this large inland manufacturing centre, with its diversified products due to skilled industry, it is impossible to exaggerate the importance of the movement which you represent.

I understand that the corporations of this Commonwealth as a whole have lagged somewhat behind certain other states, but Worcester with two out of the few schools in the whole state located in its midst, and with its excellent municipal Boys' Trade School bears witness to the fact that we are in no ways backward in our realization of the tremendous importance of proper training for our future employes.

We are indeed doubly fortunate to be given this opportunity to acquire first hand information of what the Corporation School is accomplishing, in that historically we are somewhat, though practically we ought to be more, on not wholly unfamiliar ground.

Why then, should the citizens of Worcester be so vitally interested in your success?

It is a trite remark, one which I almost hesitate to make, that the people of this city without the natural advantages of water transportation, have none the less, largely due to the superior quality of our workmen, built up this prosperous manufacturing community.

That our workmen have long enjoyed this reputation is most interestingly shown by a statement taken from the archives of the Worcester County Mechanics Association. Yesterday I chanced upon an appeal to the Mechanics of Worcester to join the association. This is dated July, 1854; yet so pertinent is its application to existing conditions that it might well read like a Booster Editorial from our Worcester Magazine.

"The inquiry is often made by strangers," says this statement, 'What has built up so large a city in the interior, with no advantage of navigation or water power and what sustains it?' "

The enterprise of the mechanic, assisted and encouraged by the liberality of the citizens generally, is the only and sufficient answer.

But we citizens of Worcester in the year 1915 cannot afford to sit back in snug complacency. Continuous striving is essential if we are to hold our place in the face of the keen competition of our more fortunately favored neighbors. The apprentice must be trained since there is no special magic in our air, the mere breathing of which brings technical and mechanical expertness.

So do we feel. So felt an earlier generation. Thus back in 1841 a group of mechanics had met in the Town Hall and had formed the Worcester County Mechanics Association with the object among other things of "Perfecting the mechanics' art;" not confining its purpose to broadening educationally its members, it opened courses of instruction for apprentices, many of whom were the sons of members. In 1866 when this school was first started there were 140 members the first year.

In the early eighties the association inaugurated a summer school in manual instruction at the Polytechnical Institute, with skilled mechanics to teach the boys. The late Milton P. Higgins was in charge of the classes and at that time the attendance reached some 50 persons.

Both these early schools were but precursors to municipal instruction in these same lines, the ultimate and logical outgrowth of which is the Boys' Trade School, which is doing such excellent work. Many of you were doubtless present at the exercises in this school last evening when memorial tablets to Milton P. Higgins, called the Father of Worcester's Trade School, were unveiled.

Again the early establishment of a technical school here is but another example of the foresight with which our citizens have dealt with the need of technical training. It is appropriate that at the time of this Convention this famous scientific school should be celebrating its 50th anniversary.

As in the past we have striven after methods of accomplishing our purposes and not without success, so now let us be quick to grasp the significance of the Corporation School idea which is but another phase and application of technical training with which we have long been familiar.

The coming of this Convention to Worcester I believe to be singularly fitting in view of the double significance, at once historical and practical, which attaches to your presence here in our midst.

May we not fail then to profit by the added information which you will now give us, so, in the words of Henry S Washburn (speaking nearly sixty years ago before that Association to which I have already referred) "that upon this accumulating mass of our population New England Skill and New England Enterprise will continue to be exerted."

I thank you, gentlemen, and give you again a cordial welcome and trust that you will make yourselves free within our borders. (Applause.)

RESPONSE AND ANNUAL ADDRESS

President Charles P. Steinmetz

For The National Association .of Corporation Schools, I desire to express thanks to our hosts, to the Norton Companies and the American Steel & Wire Company who, with so much energy and effort and so much kindness, have prepared this Convention for us; and I wish to express our heartfelt thanks to the citizens of Worcester and to Mr. Lincoln, their representative, and still further to express our appreciation for the information on the history of technical schools conveyed in Mr. Lincoln's address.

During the last generation a radical advance in the efficiency of the industrial system of our country has taken place by the progress from the individualistic production of the days of Lincoln, to the corporate production of today. While the corporation is proving the most powerful and most efficient tool of industrial progress, at the same time some defects have appeared, and have led to the present rather widespread antagonism against the corporation. Nevertheless these defects are not inherent in the nature of the corporation, but are due to its newness and crudeness, which led us to overlook too much the human element in the industrial relations between corporation, employes and public. In the small production of bygone days, personal relations existed between the individual employer and employe, which do not exist in the large corporations, and must be replaced by organized effort. That is, to the financial, administrative and engineering or manufacturing activity must be added a fourth activity, that dealing with the human relations of the corporation with its employes and the public at large, before the corporation can sociologically justify its existence. The beginning hereof is seen in the so-called "welfare work" in attention to hygiene and safety, profit sharing and service annuities, etc., and in the educational work of the corporation.

Amongst the first corporation schools were the special apprentice courses established by some industries to provide for their specific educational requirements which could not be supplied by educational institutions nor by practical experience. Such are the student engineers courses established twenty-five years ago by electrical manufacturing companies. In these, college graduates are by one to two years' training in factory, testing room and office fitted for the higher positions in the company. The early corporate development of the electrical industry made this possible, and also made it possible to exert a considerable influence in shaping the curriculum of engineering colleges towards higher industrial efficiency of the graduates, and in my opinion the superiority of the electrical industry of the United States is largely due to the educational work, carried on in co-operation with the engineering colleges. Similar special apprentice schools have been established by electrical operating companies, for the training of station operators, etc.

Intermediate between the special apprentice schools and the general trade apprenticeship are and may be classed those dealing with new occupations resulting from the corporate development, such as salesmanship, business getting, office work, etc. They represent activities sufficiently broad to be undertaken by public educational institutions, as business colleges, high school business courses, etc., in co-operation with, or preliminary to the corporation school, and thus form a separate class.

The most serious problem resulting from the corporate development of the industry is, however, the failure of the supply of skilled working men. In individualistic production of old, the apprentice or helper learned his trade from his employer, who was skilled in the trade. To some extent this is still the case in some trades. But within the field of the modern corporation, with its subdivision and increasing specialization of work, very little chance existed for the young man to learn a trade and become a skilled workman. Immigration from Europe for some time supplied skilled workmen. However, European countries have become industrial, and retain their skilled men, and those who emigrate are directed to European colonies, so that the supply by immigration is vanishing, while the demand of our industries is increasing.

Vocational training thus has become the most important problem of the American industries.

This is realized even more outside of the corporation, by the general public. There it appears as a problem of the parents, to find a suitable occupation for their children, as a problem of the young men and women, to find work without getting into a dead alley occupation. Increasingly the general public thus makes the demand on the public schools, to provide the vocational training, which the industry gave in former times, but which it now, in its corporate form, fails to give: so far, the output of the apprentice courses of corporations is still very small compared with the industrial demand.

The trade apprenticeship courses of corporations, and the industrial education of the public schools, at first appear to be in competition with each other, but in reality the problem of the trade apprenticeship can be solved only by the co-operation of the corporation and the public school, as was proven by the experience in the professions. Once it was customary for a young man to go into an engineering office to learn engineering, into a law office to study law, etc. Experience has eliminated this as giving too narrow and limited knowledge, and the engineering college, the law school or medical school now are the avenues of approach to the profession. But experience also has shown, that the graduate of the engineering school is not an engineer, the graduate of the law school or medical school not a lawyer or physician, but merely prepared to enter the practical part of his professional education in the industry, the law office or the hospital. Applying the same to the trades, we see that the practical trade training must be given in the industry, by the corporation apprentice course, but the public schools must do the preparatory work.

The field of the corporation school is the industrial training of those fitted for the industry. The field of the public schools is the general education, that is, to supply that minimum amount of knowledge, which every intelligent citizen must have, before he can specialize in trade or profession, or at least that part of general education, which is difficult to acquire afterwards. With increasing civilization, the requirements of general education also have increased. With increasing population, density and the growth of cities, physical development, hygiene and medical supervision become essential parts of public education, and familiarity with the use of the most common industrial tools, such as hammer, saw, etc., which formerly was acquired in the home, has to be taught by manual training in the schools. This increasing general educational demand on the schools precludes the possibility of industrial training, that is, of teaching a trade, within the limited time of mandatory school attendance, and industrial or vocational training thus must be continuation school work, while manual training, giving a general familiarity with the common tools of industry such as every man should possess, belongs in the grades as mandatory subjects. This sharp distinction between manual training and industrial education is not always realized. Industrial training belongs into, and can be efficiently accomplished only by the industry, by corporation apprentice courses taking the place of the former individual apprenticeship or by co-operative systems of public school and corporation; vocational continuation schools, technical high schools, etc., can be of limited usefulness only, but the new field of the public school is to establish an intelligent system of vocational guidance, based on the teachers' familiarity with the pupils' characteristics, and especially on the adaptability and interest shown in manual training, so as to lead the pupils into those trades and professions, for which they are adapted, and in which they can find the satisfaction resulting from success.

With the heterogeneous population of our country, where some States maintain fairly good educational systems, many other States practically none, and a large number of immigrants, handicapped by unfamiliarity with the American language, complicate the problem, the general educational work of the public school can not stop at the end of the school age, but must be continued by evening schools, language classes and other educational efforts, and it is here, the duty of the corporation to see that these educational facilities are provided by the public schools, and to exert its influence on the employes, even if they are beyond school age, to avail themselves of these educational facilities.

The limitation of the corporation activities in the educational and similar fields necessarily is that given by the limitation of the corporation purpose: to earn dividends for its stockholders; no human activity in this or other fields can be justified before the stockholders' meeting, which does not show a favorable financial balance, however much the corporation directors may desire philanthropic work. This is often difficult to show, as the beneficial results are largely "intangibles," and it must be proven to the satisfaction of the administrative heads of the corporation, that these benefits are very real, consist in the better relations between corporation and employes, their higher efficiency and better co-operation, the lesser liability to interference by industrial warfare, etc. Also, we must realize, that the right of existence of the corporation is challenged by a considerable part of the public, and self-defense justifies the expense in activities bringing home to the public the benefits which can be derived from corporate industrial organization.

The human activities of the corporation are co-operative with its employes, and the favorable attitude and viewpoint of the employes thus is essential for their success. Herein lies the cause of many of the failures. It is not sufficient for the corporation to undertake such educational, welfare and other activities, as are in the opinion of the corporation managers for the best interests of the employes, but the corporation actions must be such that the employes and their organizations take the same viewpoint, otherwise welfare work may be resented as charity, educational work opposed by the suspicion of an ulterior motive hostile to the employe's interests, as an attempt of breaking down their organizations, safety regulations, as an attempt to evade responsibility, etc.

In the individualistic production of old, employer and employe met on fairly equal terms. With the close organization of numerous employers, as stockholders of the industrial corporation, organizations of the employes also appeared, as a matter of course, in the labor unions. Theoretically, the aims of both organizations, the organization of employers as stockholders of the corporation, and the organization of employes as labor union, are the same: efficiency of industrial production to increase the return on the investment in labor and in capital. Unfortunately, however, the relations between the two organizations have frequently been hostile, industrial warfare over the distribution of the returns rather than co-operation for the increase of financial returns of both parties, and as the result, mutual suspicion and antagonism has risen making efficient corporation for mutual advantage of corporation and employes difficult, while the obvious advantage of organization, illustrated in the industrial corporation, necessarily tends to lead to the organization of the employes in some form or another, and any attempt of substituting for the unions formed by the employes, employes' organizations formed by the corporation, gives an apparent justification to suspicion. On the other hand, we must realize there always have been, and always will be leaders, as the majority of the people prefer to be led, and the natural leaders in the co-operative human activities of the industrial corporation would be the leaders in its other activities, if once the suspicion were removed by evidence that it is not justified any more, and the leadership accepted.

This problem is still unsolved, and is most serious, especially in a democracy, where hostile masses, though incapable to reconstruct, have the power to destroy, and are beginning to use it, as the industrial history of the last ten years of the United States has shown.

While under pressure of public opinion, influenced by the dying remnants of former individualistic production, and hostile employes' organizations, all political parties profess hostility to the great industrial corporations in the fulminations of the stump speakers or soap-box orators at the street corners, there is nothing in the principles of the great political parties, antagonistic to corporate organization of the industries.

The principle of the Republican Party has always been centralization, that is, to the larger organization belongs what it can do better than the smaller organization. This is the principle of the industrial corporation.

The Democratic Party has been the party of decentralization, of individualism, and therefore was inherently hostile to the corporations, but industrial laws, more powerful than party doctrines, are forcing it towards centralization, and all the constructive work of the present Democratic Administration has been unwilling centralization.

The Socialistic Party can not be antagonistic to the corporation principle, since its ultimate aim, socialistic society, may be expressed as the formation of the industrial corporation of the United States, owned by all the citizens as stockholders.

More serious appears the objection against the industrial corporation, that it destroys the individualistic development, on which all progress, in invention, scientific research, etc.. is based, and therefore is hostile to civilization. It is true, that in the early days of the new country, when unlimited natural resources gave everybody a good chance for success, individualistic effort was most efficient for progress. But these times have long passed, and in the world today, the fight for existence has become so intense, that the individual's energy is wasted in the mere earning of a living, without much chance of development, and it is only in the comparative safety of the industrial corporation, or the educational corporation, the university, that the conditions are favorable for such development of individualism as leads to the world's progress. It is significant that to day practically all scientific research, most of the inventive and development work is done within the industrial corporations or the educational institutions, and very little by the unattached individual, showing that in the corporation is found also the most efficient means of making individual development possible in our present state of civilization.

So you see that the great problem before us is that of providing the means for the industrial advancement by educating skilled employes; and the still greater problem of establishing co-operation between the corporation and its employes and the public at large. This co-operation must be established and can be done only by the corporation's extending into the human activities, devoting more energy and more interest to them. It must make the employes and the public at large realize that the corporation recognizes as an essential field of its activity the relation between it and its employes, and the public at large. Our organization deals with one, and one of the most important activities within this field, that is education. In this activity the corporation comes in contact with the public at large more than by any other activity, and comes in contact with the organization of the public school system and must, for its success and for the success of the school system, co-operate; and it is here that the greatest amount of useful work can be done and must be done if our country should continue its industrial progress uninterruptedly. (Applause.)

The next on the program is the roll call and since the registration will be printed and will give us the list of attendants, I think we may eliminate the roll call and proceed with the next part of the program, which is the annual report from the Executive Secretary. I therefore call upon Secretary Henderschott.

REPORT OF THE SECRETARY

Mr. President, Delegates and Guests: Shortly after adjournment of the Second Annual Convention of our Association the war broke out in Europe. The effect of the war upon industrial conditions in our country was such that our Association has shown but little in the way of growth so far as new Class "A" members are concerned, although I feel we are to be congratulated on the fact that but four of our Class "A" members withdrew.

Your Executive Committee decided to abolish the General Educational Committee and assume the activities which this committee previously handled. Your Executive Committee invited the chairman of the various sub-committees to meet in joint session and discussion was had relative to the work to be done by the sub-committees and to the substance and form of their reports. These reports were made to the Executive Committee at a meeting in April and were printed and circulated to all of our members in advance of this convention, thus enabling our members to come prepared to discuss the reports.

There was criticism on the part of members that sufficient opportunity was not given at our first convention for discussion. This criticism was apparent again at the time of our second annual convention. The criticism seemed just and worthy of careful consideration and your Executive Committee therefore decided to omit addresses from the program of this convention and to devote the entire time available to reading and discussion of the various committee reports.

PUBLICATION OF PROCEEDINGS OF SECOND ANNUAL CONVENTION

Your Executive Committee acting under the authority conferred upon it by our members assembled has caused to be printed one thousand copies of the proceedings of our second annual convention and copies of the bound volumes of these proceedings have been furnished to all of our members. Several copies have been sold to universities, libraries, etc., and there are still on hand bound volumes of the proceedings of our second annual convention, also bound volumes of the proceedings of our first convention.

MONTHLY BULLETIN

Acting under authority of the Executive Committee your Executive Secretary has continued to edit and publish a Monthly Bulletin. Twenty copies are sent to addresses furnished by Class "A" members without expense and one copy is sent free to Class "B" and Class "C" members. Your Executive Secretary has continued to mail each month a copy of the *Bulletin* to the principal daily newspapers in the leading cities of the United States, to the principal libraries, and universities, to a list of prospective Class "A" members (industrial institutions), State Superintendents of Education, Chairmen of Educational Committees of State Federations of Women's Clubs, commissions, college professors and other individuals who have requested the *Bulletin* and who are interested in the problems of broader education. The supply of the *Bulletins* being limited to three thousand copies and the growing list on account of Class "A" membership have made it impossible to reach all of our list each month. To make it possible for any one who cared to do so to subscribe to the *Bulletin* a price of $2.00 per year was fixed and single issues have been sold at twenty-five cents the copy. A small subscription list has been built up which, undoubtedly, can be much enlarged during the coming year.

PUBLICITY

The number of articles concerning our Association and its work appearing in the daily, weekly, monthly and trade publications has continued to increase. Our Association is now generally known and its activities are becoming better understood among the colleges, universities and educators in general. Many requests for information have been received and all requests for information within reason have been complied with.

WORK OF COMMITTEES

Your Executive Committee decided to issue one general questionaire instead of having each committee send out a questionaire for information desired. The general questionaire was compiled by a Special Committee from questionaires sent in by the sub-committees. The general questionaire was sent to a list of one hundred and twenty-one industrial institutions including all Class "A" members of our Association, such Class "C" members as are industrial institutions and industrial corporations known to be doing educational work but not yet members of our Association. Sixty-four replies were received and the information turned over to the sub-committees. This method, while more satisfactory than having each committee issue questionaires, does not fully meet the requirements of our Association. It was hoped that our Association would be able to finance the services of special investigators and this proposition was submitted to the Policy and Finance Committee at its first meeting, but owing to industrial conditions due largely to the war in Europe, it was found impractical to attempt to raise additional funds at that time. However, the Policy and Finance Committee has issued an appeal for additional funds and it is hoped that the incoming administration will be able to finance the services of special investigators to secure such definite data as the committees will require in connection with their work during the coming year and to be used in their reports to our convention in 1916.

INCORPORATION

It is the sense of your Executive Committee that our Association should be incorporated. Effort was made through the firm of Beardsley, Hemmens & Taylor of Counsel for our Association to incorporate under the laws of the State of New York. It was found, however, that we could not incorporate our Association in New York State except by permission of the Board of Regents and that if we did incorporate, the Board of Regents would have control over such corporation schools as are located within the State of New York and that the Department of Education of other States would be in a position to assume control over the corporation schools located within the boundaries of their various States. This matter came before your Policy and Finance Committee at its last meeting and Mr. Williams, chairman of that committee, was delegated to take the matter up with Mr. Hemmens of Counsel with a view of ascertaining if it would not be possible to incorporate only the business portion of our Association.

EXTENSION OF EDUCATIONAL WORK

With few exceptions the Class "A" members of our Association have continued educational work on behalf of their employes. The industrial conditions of the past year have, of course, retarded the extension of such work. Notwithstanding the depression, however, many new corporations have inaugurated educational courses on behalf of their employes and many of the corporations already members of our Association have extended their educational activities

Your Policy and Finance Committee decided at its last meeting to make a general appeal to all of the larger industrial institutions of the United States to take Class "A" membership in our Association and join with us in extending the corporation school movement and in the other activities to which our Association is dedicated. Such an appeal will be issued shortly after the close of this convention.

PRESENTATION OF TABLET TO MR. CURTIS

A beautiful bronze tablet, similar in character to the one presented to Mr. John H. Patterson as an evidence of appreciation on the part of our Association, was presented to Mr. Cyrus H. K. Curtis for being host to our second annual convention by a committee designated by your Executive Committee. The ceremony was simple but impressive, Dr. Galloway making the presentation to Mr. Curtis. The full committee accompanied Dr. Galloway to Philadelphia and the presentation was made in Mr. Curtis' office. Mr. Curtis responded with assurances of deepest interest in our Association and continued support for its activities.

ACTIVITIES OF STANDING COMMITTEES

The printed copies of the reports of our Association, which were mailed to each of you, best indicate to you the activities of these committees. It is the opinion of your Executive Secretary that the time has now arrived when each committee should be given definite tasks and should make reports covering definite investigations at our annual conventions. Just what subjects should be assigned to the various committees can best be determined from the discussions of the reports which are made this year. Your Executive Secretary, however, would welcome suggestions along this line from any member of our Association.

COMPILATION OF EDUCATIONAL LAWS

Your Executive Secretary is undertaking to make a compilation of all new laws passed by the various States which laws affect education and especially industrial and agricultural courses. Most of these data have been gathered from the various States and the report when completed will be published in the *Monthly Bulletin.*

RECOMMENDATIONS

1. Your Executive Secretary recommends to this convention the appointment of a special committee on revision of the Constitution. It is further recommended that this committee, if appointed, consider raising the membership fee for Class "A" members to $250.00, annual dues to remain as at present, $50.00 per year. Certain industrial corporations are doing the pioneer work from which all American industry must profit. It seems but fair and just that those industrial institutions which do not join in doing this work should pay a higher membership fee to our Association, thus in part enabling our organization to reimburse itself for development expenditures. There are other matters that should be referred to this committee as there was but little to guide the Committee on Constitution which made the original draft.

2. It is further recommended that a Special Committee be appointed to undertake a compilation of educational work being done by all Class "A" members of our Association. This committee's report could be reduced to a chart and would be of much value to other members and to industry as a whole. The Government's Bureau of Education is constantly asking for information relative to the courses provided by corporations which are Class "A" members of our Association but your Executive Secretary is unable at the present time to furnish the Government with such data.

3. It is further recommended that members of our Association do not furnish information requested by other than members of our Association except upon approval of the Executive Committee. There seem to be several who are attempting to write and publish books dealing with this subject and some information which has been furnished has appeared in garbled form.

While the corporation school has found a place among the other educational activities of this country with but little opposition, there is always danger of antagonism caused by some irresponsible party's stating that our Association stands for this or that or something which we cannot endorse. It is therefore the judgment of your Executive Secretary that any information which is furnished should be given out by authority of our Executive Committee.

4. Inquiry has been received from several sources as to persons available to assume educational direction of corporation schools and for persons qualified to inaugurate such work in corporations where it does not now exist. While there are on file in the Executive Secretary's office a few applications for such positions the applicants are usually inexperienced but desirous of doing this class of work. Some of the universities have signified a willingness to conduct courses with the object of developing competent persons to become educational directors for corporations. This movement should be encouraged. The success of our Association will rest finally upon the success of the corporation school. We need the help and co-operation of established institutions of learning. Any effort along this line made by reliable and established educational institutions should meet with a hearty response on the part of the members of our Association.

THE FUTURE

Our Association is now of sufficient age and has attained sufficient experience to justify a more definite program for the future. Our Committee on Policy and Finance will, no doubt, be able to raise sufficient funds to carry on more extensive activities than have up to this date been possible. Our Association now has a permanent place in the development of educational systems in our country. Greater research work is necessary. More definite lines of activity should be pursued by the committees of our Association. No one should be permitted to speak for our Association unless directed to do so by your Executive Committee. Interest in our Association and in its activities is constantly increasing. American industry is awakening to the fact that the trained man is the man who wins. It therefore seems fitting that our Association should evolve a definite and tested plan under which to conduct its activities, a plan that will insure continued growth and increased confidence and support on the part of American industries.

President Steinmetz: I now call for the annual report of the Treasurer, Mr. George B. Everitt.

THIRD ANNUAL REPORT OF THE TREASURER

Up to within about two months ago Mr. Mehren was the Treasurer of your Association. For various reasons he felt that he must resign. His resignation was accepted and during the balance of this fiscal year I have been acting as Treasurer. I present this report now to the President and the Delegates.

Report of the Treasurer, The National Association of Corporation Schools from June 6, 1914, to June 4, 1915.

Receipts

Dues Class "A"	$3,490.00	
Dues Class "B"	415.00	
Dues Class "C"	680.00	
Sale of 1st Proceedings	147.00	
Sale of 2nd Proceedings	243.00	
Interest on Bank Deposit	45.96	
Miscellaneous	16.45	
Bulletin Subscriptions	42.96	
	$5,080.37	
Cash on hand June 6th	2,911.19	$7,991.56

Disbursements

Administration	$1,162.98	
Bulletin	3,077.99	
1st Proceedings returned	2.50	
2nd Proceedings	1,866.98	
Committee on Membership	45.50	
Committee on Advertising, Selling and Distribution	199.97	
Committee on Safety, Hygiene and Co-operation	30.00	
Committee on Allied Institutions	7.10	
Convention	1,423.11	
Discount	4.23	
Miscellaneous	27.44	$7,847.80
Cash on hand June 4th		$143.76

Assets

Unpaid Class "C" dues	$30.00	
Due on 1st Proceedings	17.50	
Due on 2nd Proceedings	27.50	
Bulletin subscriptions	1.25	
Bound volumes of Proceedings of First Annual Convention on hand 470@$1.50 $705.00 less 25% for loss, etc., $176.25	528.75	
Bound volumes of Proceedings of Second Annual Convention on hand 674@$2.00, $1,348.00 less 25% for loss, etc., $337.00	1,011.00	
Approximately 100 unbound volumes of *Monthly Bulletin* @ 50c	50.00	
Cash on hand for petty expenses	10.27	$1,676.27
Total Assets		$1,820.03

Liabilities

None.

Cash Book Balance—June 4th, 1915			$143.76
Checks outstanding—No.	534	$1.34	
Checks outstanding—No.	539	13.50	
Checks outstanding—No.	540	188.35	
Checks outstanding—No.	541	138.69	
Checks outstanding—No.	542	649.35	991.23
			$1,134.99
Deposited June 3rd, 1915			$130.00
Bank Balance—June 1st, 1915			$1,004.99

Respectfully submitted,
(Signed) George B. Everitt,
Treasurer.

The books of your Treasurer were audited May 5th, 1915, by Mr. M. T. Chernich, an auditor from the Equitable Life Assurance Society. This audit was approved by a special committee consisting of Dr. Lee Galloway, Mr. F. P. Pitzer and Mr. H. G. Petermann. It was on this date Mr. Mehren retired as treasurer and your present treasurer assumed office. An official audit was not deemed necessary.

Statement taken from books of accounts of The National Association of Corporation Schools as of May 4th, 1915, audited and verified by M. T. Chernich.

From June 6th, 1914, to May 4th, 1915, inclusive.

Receipts

Dues Class A	$3,090.00	
Dues Class B	405.00	
Dues Class C	610.00	
Sale of First Proceedings	144.50	
Sale of Second Proceedings	239.50	
Interest on Bank Deposits	45.96	
Miscellaneous	16.45	
Bulletin Subscriptions	35.96	
	$4,587.37	
Cash on hand June 6th, 1914	2,911.19	$7,498.56

Disbursements

Administration	$1,031.42	
Bulletin	2,658.14	
First Proceedings returned	2.50	
Second Proceedings	1,866.98	
Committee Membership	45.50	
Committee on Advertising, Selling and Distribution	199.97	
Committee on Safety, Hygiene and Co-operation	30.00	
Committee on Allied Institutions	7.10	
Conventions	569.57	
Discount	3.93	
Miscellaneous	26.10	
	$6,441.21	
Cash	1,057.35	$7,498.56

Assets

Cash Balance Broadway Trust Co.	$1,000.85	
Checks on hand:		
G. H Jensen dated 4/22/1915	2.00	
Taylor Holden Co. dated 4/27/1915	2.00	
State Normal School of California dated 4/27/1915	2.50	
Equitable Life Assurance Society dated 5/3/1915	50.00	$1,057.35
Cash on hand for petty expenses		11.77
Unpaid Class "A" dues		100.00
Unpaid Class "B" dues		15.00
Unpaid Class "C" dues		140.00
Due on First Proceedings		17.50
Due on Second Proceedings		26.00
Due on *Bulletin* Subscriptions		5.00
Bound volumes of Proceedings of First Annual Convention on hand 480@$1.50, $720.00 less 25% for loss, etc., $180.00		540.00
Bound volumes of Proceedings of Second Annual Convention on hand 684@$2.00 $1,368.00 less 25% for loss, etc., $342.00		1,026.00
Approximately 100 unbound volumes of *Monthly Bulletin* @ 50c		50.00
		$2,988.62

Liabilities

None

May 5th, 1915. M. T. Chernich,

F. P. Pitzer, H. G. Petermann,

Lee Galloway.

PRESIDENT STEINMETZ: The next in order now is the response of the Chairman of the Policy and Finance Committee. Unfortunately the chairman happens to be out on the Pacific Coast and while we would like to hear from him, he has delegated his report to be read by the Executive Secretary, who will now read his report.

Mr. Henderschott: The National Electric Light Association and our Association held their convention the same week. There was some rivalry as to whom we should have. They secured Mr. Arthur Williams of The New York Edison Company and we have Dr. Steinmetz with us. Therefore I find that I have to read Mr. Williams' report:

REPORT OF THE COMMITTEE ON POLICY AND FINANCE

Mr. Arthur Williams, Chairman

To the Members of The National Association of Corporation Schools: The purpose of the organization of this committee was twofold. It was partly to guide the affairs of the Association, particularly in reference to general policies, and partly to recommend to the membership from time to time the adoption of such constructive methods as might seem desirable in most adequately promoting the cause of specialized industrial and general education amongst the workers of the country. In the judgment of the committee, the forms of education that are conducted under the auspices of the Association provide a means available in no other manner for bringing to the employes of our membership a specialized training which would greatly increase their immediate efficiency, and a general education which should be of great benefit to themselves, individually and as citizens, and to their employers. Whether the means for study are provided in the employers' time or in the time of the employes, the results promise to be lasting and of a more beneficial nature.

Your committee has held two meetings. The first held in December, 1914, was poorly attended and practically nothing was accomplished beyond a discussion of problems affecting the progress and work of our Association. The second meeting was held on May 12th and there was a satisfactory attendance. Our Association has suffered with all other lines of activity through the unsettled business conditions due largely to the war in Europe. It has been a period for conserving and awaiting developments.

During the last few weeks, however, new memberships have been coming in and there are indications that the United States, if it escapes from entangling alliances, will shortly become independent of the foreign situation. If this anticipation is realized our Association will, undoubtedly, make rapid progress during the coming year.

One of the immediate requirements of the Association is a department which can study and recommend, and even provide, an organization which will meet the individual needs of our membership—one which can, after making a study, recommend forms of organization and a curriculum which, while individualizing and specializing, will at the same time provide for that more general education which will be most useful and helpful to the employes and to their employers.

At the last meeting of your committee serious consideration was given to the subject of additional revenue and a sub-committee consisting of:

Mr. Arthur Williams,
Mr. George I. Alden,
Chancellor E. E. Brown,
Mr. George B. Cortelyou,
Mr. N. C. Kingsbury,
Mr. John H. Patterson,
Mr. Herbert J. Tily,
Dr. Charles P. Steinmetz

was appointed to devise ways and means for securing such revenue.

Your Policy and Finance Committee felt that our Association was proceeding along right lines but will, no doubt, from time to time offer suggestions as to future policies. This committee has also planned to enter actively into the subject of securing new Class "A" memberships.

At the last meeting of this committee Mr. Kingsbury moved that our Association extend an invitation to executives of industrial corporations of the United States to take membership in our Association and to aid in the work of developing industrial education, this invitation to be signed by all members of the committee present at the meeting. The motion was seconded by Mr. Patterson and unanimously carried, it being understood, however, that this letter would not be sent out until after the third annual convention of our Association in June.

This committee plans to hold meetings from time to time and to take a very earnest and active interest in the welfare of our Association.

Respectfully submitted,
ARTHUR WILLIAMS,
Chairman.

PRESIDENT STEINMETZ: I would now like to hear the annual report of the Chairman of the Membership Committee, Mr. Henderschott.

REPORT OF THE MEMBERSHIP COMMITTEE

Membership—all classes at the time of previous report, June 9th, 1914—162 divided as follows:

Class A	52
Class B	62
Class C	48

Membership as of June 1st, 1915, total—192.

Class A, a gain of 13	65
Class B, a gain of 8	70
Class C, a gain of 9	57

CLASS "A" MEMBERS ADDED SINCE JUNE 9TH, 1914:

American Bridge Company, J. E. Banks, Pittsburgh, Pa.
Commonwealth Steel Company, Arthur T. Morey, St. Louis, Missouri.
Dennison Manufacturing Company, C. E. Shaw, Framingham, Mass.
Dives, Pomeroy & Stewart, Ralph W. Kinsey, Reading, Pa.
Goodyear Tire & Rubber Company, C. R. Johnson, Akron, Ohio.
Illinois Steel Company, T. W. Robinson, Chicago, Illinois.
Thomas Maddock's Sons Company, J. T. Spicer, Trenton, New Jersey.
Metropolitan Life Insurance Company, Dr. Louis I. Dublin, New York, N. Y.
The Midvale Steel Company, R. B. Lindsay, Philadelphia, Pa.
Montgomery Ward & Company, William R. DeField, Chicago, Ill.
National Tube Company, Taylor Allderdice, Pittsburgh, Pa.
Oregon Short Line Railroad, L. E. Abbott, Salt Lake City, Utah.
Phoenix Mutual Life Insurance Company, H. A. Hopf, Hartford, Conn.
Remington Typewriter Company, F. E. Van Buskirk, New York, N. Y.
Southern Pacific Company, Norman Collyer, San Francisco, Cal.
State Trade Shops of Connecticut, F. J. Trinder, New Britain, Connecticut.
Swift & Company, E. L. Ward, Union Stock Yards, Chicago, Ill.

CLASS "A" MEMBERS RESIGNED SINCE JUNE 9TH, 1914:

The American Multigraph Sales Company, F. S. French, East 40th Street & Kelley Avenue, Cleveland, Ohio.

The Lunkenheimer Company, H. Ritter, Cincinnati, Ohio.

Spencer Trask & Company, E. W. Bulkley, 43 Exchange Place, New York City.

The Stanley Works, Albert Zimmerman, New Britain, Conn.

CLASS "B" MEMBERS ADDED SINCE JUNE 9TH, 1914:

George I. Alden, President, Norton & Norton Grinding Companies, Worcester, Mass.

F. N. Bolles, The New York Edison Company, New York, N. Y.

F. J. Brownscombe, National Cloak & Suit Company, New York, N. Y.

F. L. Devereux, American Telephone & Telegraph Company, New York, N. Y.

H. W. Dunbar, Norton Grinding Company, Worcester, Mass.

J. B. Ennis, American Locomotive Company, New York, N. Y.

Thomas G. Gray, Southern Pacific Company, Sacramento, Cal.

R. B. Harvey, Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

Mark B. Hughes, Cadillac Motor Car Company, Detroit, Mich.

L. A. Larsen, American Locomotive Company, New York, N. Y.

Charles Robbins, Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.

J. C. Robinson, The New York Edison Company, New York, N. Y.

Frederick Uhl, American Telephone & Telegraph Company, New York, N. Y.

E. C. Wolf, The Curtis Publishing Company, Philadelphia, Pa.

SUBSTITUTIONS—(CLASS "B")

W. A. Blum, The National Cash Register Company, Dayton, Ohio, for O. Kressler.

Miss F. Dressler, The New York Edison Company, New York, N. Y., for Miss C. Eichbauer.

J. P. Henry, The National Cash Register Company, Dayton, Ohio, for Mrs. V. V. Farone.

P. E. Illman, The National Cash Register Company, Dayton, Ohio, for R. H. Grant.

R. D. Jackson, The National Cash Register Company, Dayton, Ohio, for J. Hayward.

J. F. Kelly, The New York Edison Company, New York, N. Y., for William Gould.

F. B. Patterson, The National Cash Register Company, Dayton, Ohio, for G. W. Bookwalter.

R. C. Routsong, The National Cash Register Company, Dayton, Ohio, for L. E. Olwell.

CLASS "B" MEMBERS RESIGNED SINCE JUNE 9TH, 1914:

M. W. Alexander, General Electric Company, Lynn, Mass.

F. S. Balyeat, Westinghouse Electric & Manufacturing Company, Seattle, Washington.

C. R. Beeman, Union, New York.

Mrs. E. C. Crosby, The New York Edison Company, New York, N. Y.

Samuel Graydon, The Trow Press, New York, N. Y.

Miss C. Eichbauer, The New York Edison Company, New York, N. Y.

C. A. S. Howlett, General Electric Company, Schenectady, N. Y.

L. W. Jared, American Multigraph Sales Company, Cleveland, Ohio.

C. E. Morton, Packard Motor Car Company, Detroit, Mich.

Tim Thrift, American Multigraph Sales Company, Cleveland, Ohio.

CLASS "C" MEMBERS ADDED SINCE JUNE 9TH, 1914:

Sidney A. Aloe, A. B. Kirschbaum Company, Philadelphia, Pa.

W. T. Bawden, United States Bureau of Education, Washington, D. C.

Miss M. E. Eastwood, The William Penn High School, Philadelphia, Pa.

Miss Caroline Eichbauer, The National Board of Fire Underwriters, 76 William Street, New York, N. Y.

A. P. M. Fleming, The British Westinghouse Electric & Manufacturing Company, Trafford Park, Manchester, England.

Hugh F. Fox, United States Brewers' Association, 50 Union Square, New York, N. Y.

J. L. Halley, 1098 Elmore Place, Brooklyn, New York.

C. A. S. Howlett, Diehl Manufacturing Company, Elizabeth, N. J.

E. St. Elmo Lewis, Art Metal Construction Company, Jamestown, N. Y.

W. C. Locker, John Marshall Night High School, Richmond, Va.

C. R. Mann, Carnegie Foundation for the Advancement of Teaching, 576 Fifth Avenue, New York City.

W. K. Nash, Nash Brothers, 928 Plymouth Building, Minneapolis, Minn.

Homer S. Pace, Pace & Pace, 30 Church Street, New York City.

C. B. Robertson, University of Pittsburgh, 3301 Iowa Street, Pittsburgh, Pa.

W. B. Russell, Franklin Union Industrial School for Men, Boston, Mass.

G. L. Sprague, The Stout Institute and Wisconsin State Board of Industrial Education, Racine, Wisconsin.

Philip J. Warner, The Ronald Press, 20 Vesey Street, New York, N. Y.

J. C. Whitman, State Civil Service Commission, Sacramento, Cal.

C. L. Woodfield, The Chicago Typothetæ School of Printing, 536 S. Clark Street, Chicago, Ill.

SUBSTITUTIONS—(CLASS "C")

F. H. Ball, Director of Industrial Education, Pittsburgh, Penn., for E. S. Lea.

Leo Greendlinger, Alexander Hamilton Institute, New York, N. Y., for W. H. Lough.

CLASS "C" MEMBERS RESIGNED SINCE JUNE 9TH, 1914:

W. P. Butler, Beaver Board Companies, Buffalo, N. Y.

Miner Chipman, 209 Brattle Building, Harvard Square, Cambridge, Mass.

Sherwin Cody, National Associated Schools of Scientific Business, 189 West Madison Street, Chicago, Ill.

S. Roland Hall, Alpha Portland Cement Company, Easton, Pa.

Professor Herbert W. Hess, University of Pennsylvania, Philadelphia, Pa.

H. A. Hopf, Phoenix Mutual Life Insurance Company, Hartford, Conn. (Now Class "A" member)

T. H. McCoy, Bureau of Commercial Economics, Philadelphia, Pa.

W. H. McElwain, W. H. McElwain Company, 348 Congress Street, Boston, Mass.

J. M. Macdonald, The Proctor & Gamble Company, Cincinnati, Ohio.

Crispin Oglebay, Ferro Machine & Foundry Company, Cleveland, Ohio.

Thomas Stanion, Commonwealth Steel Company, St. Louis, Missouri. (Company now Class "A" member).

E. L. Wertheim, West Side Y. M. C. A., 318 West 57th Street, New York City.

Most of the new members have been received within the past six weeks or since the business revival commenced throughout the United States. There are several good prospects for Class "A" membership corporations which would undoubtedly join our Association under normal business conditions.

You noted in the report of the Policy and Finance Committee that an appeal is to be issued by that committee to the industrial institutions of this country asking them to take Class "A" membership in our Association and thus aid in the advancement and development of the movement to which our Association is dedicated—broader education.

Now if you should desire to pass favorably upon the recommendation of your Executive Secretary for a committee to revise the Constitution, it would take one year's time before any report made by that Constitution Committee could become effective.

I am of the opinion, if the membership fee was raised to $250 that you would get quite a large increase in your Class "A" membership before that larger fee became effective. We have reached a point, what was three years ago a dream, the ideal of perhaps a very few people. What two years ago was an experiment is, I believe I can safely say to-day, an institution and part of the educational system of this country. We have not had sufficient revenue to carry out the new activities that have opened up to us. How we have gotten the money to finance what we have done in the past I don't know, except that it has always come. We haven't had enough from our dues and when we have gotten to the point where we have had to have some, I have gone to some man who had it, and I have told him I wanted it, and he has given it to me. Our conventions, as you know, have been taken care of by our good and enthusiastic friends who are located here, who, you all know, are taking such good care of us. As for this year when there are three fighting for the privilege of doing the same thing next year, it seems as though we were getting along well. But, we have got to have greater revenue, there is no doubt of that, or we must step aside and see some other Association come along and take up the activities for which we have proven the necessity.

PRESIDENT STEINMETZ: Ladies and gentlemen, the resolutions brought before you by Mr. Henderschott will come up at the business meeting Friday morning.

COMMITTEE ON ALLIED INSTITUTIONS

Mr. JAMES A. ROOSEVELT, *Chairman*
ROOSEVELT & THOMPSON
71 Broadway, New York City, N. Y.

Mr. R. L. COOLEY
SUPERINTENDENT OF CONTINUATION SCHOOLS
Milwaukee, Wisconsin

Mr. NORMAN COLLYER
THE SOUTHERN PACIFIC COMPANY
San Francisco, Cal.

TUESDAY—MORNING SESSION

ALLIED INSTITUTIONS

TUESDAY MORNING, JUNE 8, 1915

PRESIDENT CHARLES P. STEINMETZ, Presiding

PRESIDENT STEINMETZ: Now I take great pleasure in introducing to you Mr. James A. Roosevelt, the Chairman of the Committee on Allied Institutions, who will present this report.

MR. ROOSEVELT: Mr. President, delegates and guests, the Committee on Allied Institutions have written to various bodies which we thought might be interested in our work, particularly to the State Superintendents of Education, to the Chairman of the Women's Clubs and to the State Librarians, as well as to various societies and bodies which are doing educational work. The most important answers which we have received have come as follows: From the State Superintendent of Education of one State, we have just received the following letter:

"I am very much interested in your Association, and I am reading your reports with considerable interest. Will you write me frankly what your attitude is towards the Public School System in general? Why do you organize, when you have night schools and day schools and compulsory attendance in New York City? I am vitally interested in the question of education and I am not afraid to have some one tell me wherein we failed as educators."

I think when the State Superintendents of Education take that point of view, The National Association of Corporation Schools ought to have some more or less concrete recommendations to make to them. I don't know exactly what committee that should come from, but I believe at the present Convention that matter should be discussed by the Association, or some committee of the Association should draft recommendations that can be made either to the public schools or to the State Superintendents of Education.

As regards the State Librarians, they have asked how they could help; and it has occurred to your committee that if the various members who were doing welfare as well as educational work would get in touch with either the city or the State Librarians, that the librarians would be very willing to supply books dealing with any particular subject. They do not supply text books, but they could supply libraries averaging about one hundred and twenty-five volumes that would deal with any particular industry or form of education that the members were conducting.

In writing to one of the Educational Associations we received from Professor Hanus of Harvard, who is the Chairman of the New England Association of College Teachers of Education, the following letter which we think is the most important received:

"It seems to me that one of the most hopeful things that you could do would be for you to suggest to us what you conceive to be the aims of vocational education. What kinds of schools should be established and approximately the realization of these aims. What should be the qualifications of teachers in these schools? What should be the relation of vocational schools, when maintained by the municipality, to the other schools? What researches should be carried on by officers and teachers of vocational schools in co-operation with officers and managers of industrial and commercial institutions with a view to determining:

"A. What are the needs of practitioners in industry and commerce?

"B. In what ways can the schools best meet these needs?

"What should be the attitude of employment managers towards the problems with which they have to deal? That is, is the employment manager's duty merely to secure employes, and to weed out the apparent undesirables, or is it also his duty to help the young employes to develop such efficiency as their capacity may make possible; and what kind of training can institutions for vocational education give to employment managers for this purpose? That is, what can be done to secure the co-operation of employment managers and schools, vocational and other schools, to secure vocational guidance based on the right kind of information for all young people about to earn their living?"

We think from the above letters that it is evident that this Association, if it is to do its most valuable work must have some concrete recommendations to make along the various lines contained in Professor Hanus' letter; that we must be able to tell the educator definitely what we want, and not merely to tell him that we do not think he is as efficient as he ought to be. And I believe that some committee here should draw up a set of recommendations which they could make to these educators. (Applause.)

REPORT OF THE COMMITTEE ON ALLIED INSTITUTIONS

The Committee on Allied Institutions submits the following report to the Third Annual Convention of The National Association of Corporation Schools.

During the last nine (9) months of 1914, fourteen thousand five hundred and fifty-nine (14,559) copies of the bulletin were sent out while during the first five (5) months of 1915, twenty-two thousand and eighty-seven (22,087) copies were mailed, showing an increase in circulation of seven thousand five hundred and twenty-eight (7,528) copies.

The various classes of people and institutions regularly receiving one or more copies of the bulletin may be roughly divided as follows:

Subscribers	19
Members	193
Libraries	202
Universities	310
Schools	112
Educators	80
Employes of Members	876
Total	1,792

Of the two hundred and eighty-seven (287) copies of the proceedings of the 1914 Convention disposed of, universities have taken twenty-four (24) copies.

The above figures, especially the increase in the number of bulletins mailed each month, we feel clearly and unmistakably show the great and growing interest which is being taken in the work of this association.

While the increase in the number of subscribers and others receiving the bulletin is of distinct interest to the members of the association, yet the most important work accomplished has been in endeavoring to establish relations with outside bodies whose co-operation we believe can be of assistance to the association or to which we believe the association can be of service. In this connection it should be borne in mind that industrial education is most advanced in certain sections of the country where manufacturing is carried on and that in consequence a large portion of the country is not as yet fully interested in our work. Therefore, the results accomplished in the first year of this committee may appear somewhat meagre.

With the idea of getting in touch with the various organizations, consisting principally of certain Medical Societies, State Superintendents of Education, State Librarians, State Presidents of Women's Clubs, and certain other educational societies, the following circular was sent out:

> The National Association of Corporation Schools, was founded by several corporations doing educational work with the object of rendering new corporation schools successful from the start by warning them against the pitfalls into which others have fallen. and to provide, a forum where corporation school officers may interchange experiences. The control is vested entirely in the member corporations, thus admitting only so much of theory and extraneous activities as the corporations themselves feel will be beneficial and will return dividends on their investment in time and membership fees.
>
> A central office is maintained where information is gathered, arranged and classified regarding every phase of industrial education. This is available to all corporations, companies, firms or individuals who now maintain or desire to institute educational courses, upon becoming members of the Association.
>
> The functions of the Association are threefold; to develop the efficiency of the individual employe; to increase efficiency in industry; to have the courses in established educational institutions modified to meet more fully the needs of industry and of the working men and women of the country.
>
> The Association would appreciate having your views on how you believe it is possible for the corporations interested in educational work to best co-operate with your association or with other associations doing work of a similar kind, to improve industrial education among those people who are already in the ranks of industry, as well as those who have not as yet started to earn their own living.

The co-operation of the Medical Societies was sought with the idea of promoting hygiene but, possibly because our letter was not sufficiently clearly worded in that respect, we have received no useful suggestions from these societies. However, during the coming year we are making plans to get into closer touch with the medical profession, and we hope at the next annual convention to be able to present something more tangible in connection with the possibilities for promoting hygiene and sanitation.

The answers from the several other classes of correspondents have contained certain useful suggestions and practically without exception have shown interest in and sympathy with the work that this Association is carrying on. Certain of the answers have contained requests for speakers to attend the meetings of the various societies, while others have asked for literature outlining our activities.

Turning more directly to the answers concerning the ability of the libraries to help education it appears, as you doubtless know, that many of the states are at present maintaining circulating libraries. These libraries containing usually from one hundred to one hundred and twenty-five volumes are sent to various literary clubs and other societies in the different towns throughout the state. It has occurred to us that it would be possible for the members of our association, who are at the same time doing welfare and club work for their employes, to secure these libraries made up with the special view of providing information concerning the particular industry which desires the library.

From certain of the letters received from the librarians we are sure that as a rule they would be glad to provide libraries dealing with subjects of special interest. It must be remembered that text books are not provided for the use of schools, but on the other hand it is possible to secure books which could be recommended by the teachers in the corporation schools for reading by the pupils.

The most important answers from others than State Librarians may be summarized as follows:

1. From the commissioner of education of one state we received the following suggestions:

> "On ways of co-operation between your association and that represented by Mrs. Hayward the greatest service at this time that you can perform is to prepare data for dis-

semination which shows whether or not it is true that the average child may do one of four or five things equally well. Second, how far it is true that workers remain somewhere near the place where they were trained and, third, how far it is true that the labor displaced by cheapening or shortening of process will be re-employed through the increased demand for the cheapest product. In directing young people into industry these facts in addition to many that have been gathered should be ascertained and be put in possession of persons who are formulating the theory and developing the practice in this field."

2. The Secretary of the National Council of Teachers of English has written in part as follows:

> "As to how The Association of Corporation Schools and the National Council of Teachers of English can coöperate, I have at the present time only one or two suggestions. In the first place, a large number of those engaged in the various industries have had but slight opportunity of education in the schools. It is conceivable that the methods which have been found most effective in school might be adapted to workers in service. In other words, the more practical among those of us who are teaching English in school might be able to offer expert advice to those who have to deal with the problem of educating the worker. In the second place, those who are giving instruction under the auspices of The Association of Corporation Schools might be of service to those who are teaching in the schools by explaining how use is made of first hand experience and also by indicating the weaknesses which are most prevalent among those who have been in school for a considerable length of time.
>
> Two definite possibilities suggest themselves to me. One would be that of a joint committee that might sit down together and discuss questions of mutual interest. The other is that speakers from The Association of Corporation Schools might take part in the program of the National Council of Teachers of English and vice versa. If these two definite suggestions seem to you to have merit, I shall

> be glad to correspond with you further as to the details of such co-operation."

3. Mr. Collyer, one of the members of this committee, has written the following concerning what is being done in California at the present time regarding education for the workman:

> "Our whole public school system is at a turning point. In the larger cities of this state the school departments are now empowered and a fund is provided for the introduction of any course whatsoever, for which there is a demand. The instructor who teaches such a course may be and generally is chosen from the particular industry from which the demand comes. For instance, in answer to a request from the employes of the Union and Risdon Iron Works, in San Francisco, courses in drawing, arithmetic, etc., are given in one of the adjacent public schools the instructor being a man who is employed by day in the Union Iron Works. So important is the subject considered that our State Board of Education has appointed a Commissioner of Vocational Education, who devotes his whole time to these questions."

4. Professor Hanus of Harvard, answered our circular letter asking for suggestions as follows:

> "Your letter dated February 8, 1915, addressed to my colleague, Professor Henry W. Holmes, Secretary of the New England Association of College Teachers of Education, and asking how best your Association could co-operate with our Association, or other associations, for the improvement of industrial education, was referred to me by Professor Holmes, I regret that my reply to your letter has been delayed so long, but I take pleasure in replying now as follows:
>
> (1) It seems to me that one of the most helpful things you could do would be to suggest to us what you conceive to be the aims of vocational education.
> (2) What kinds of schools should be established to approximate the realization of these aims?
> (3) What should be the qualifications of teachers in these schools?
> (4) What should be the relation of vocational schools, when maintained by a municipality, to the other schools?

(5) What researches should be carried on by officers and teachers of vocational schools in co-operation with officers and managers of industrial and commercial institutions with a view to determining:
   a. What are the needs of practitioners in industry and commerce?
   b. In what ways can the schools best meet these needs?

(6) What should be the attitude of employment managers toward the problems with which they have to deal? That is, is the employment manager's duty merely to secure employes, and to weed out the apparent undesirables, or is it also his duty to help the young employes to develop such efficiency as their capacity may make possible; and what kind of training can institutions for vocational education give to employment managers for this purpose? That is, what can be done to secure the co-operation of employment managers and schools (vocational and other schools) to secure vocational guidance based on the right kind of information, for all young people about to earn their living?

From the above letters it appears that there is a general interest in the work of our association and that the educators are beginning to realize that for the majority the object should be to give a practical education, rather than an education for education's sake. To accomplish this result it is necessary for business to clearly state its needs and to seek the co-operation of those responsible for the education of the young.

At the present time there is too great a tendency on the part of the educator and the business man to misunderstand each other's point of view. The educator is too apt to feel one of two things, either that a smattering of many subjects is real education, or that mental training, as arrived at by a study of unpractical subjects is essential. On the other hand, the business man tends to demand instruction along such practical lines that the pupil does not secure a broad enough point of view to ever rise to the ranks of the executive.

Both of the above points of view have their shortcomings, neither being wholly right or wholly wrong. Therefore, it should be the object of this association to reconcile these two points of view so that the greatest good can be attained.

To secure the results we are after it is a question (which is open to discussion) as to whether the work of bringing the educator and the business man closer together should be left only to local efforts in each community or whether it is possible for this association to take the various plans at present in force and try to draw up some comprehensive scheme applicable to all communities. Such a plan would of course have to be very flexible in order to meet the needs of communities differing widely in their characteristics. On the other hand we believe that there are many of the smaller towns that would be glad to co-operate with the local manufacturers in promoting practical instruction, provided they knew how to obtain the desired results.

With the idea of making The National Association of Corporation Schools the clearing house for all matters dealing with industrial education, we believe that a discussion of a plan for industrial education, particularly suited to the needs of the smaller communities is desirable.

PRESIDENT STEINMETZ: Gentlemen, owing to the limited time that we have at our disposal, I am sorry to say that we have to limit the speakers to five minutes. I especially want to impress upon you, however, that the speakers should not consider they are limited, therefore, in what they desire to say, but rather that we expect them to give a short abstract of their statements and expect to read in full what they desire to bring before us in the printed transactions.

I am sorry to hear that Dr. Paul H. Hanus, who was to lead the discussion is not here, and I will therefore call upon Mr. Norman Collyer of the Southern Pacific Company to open the discussion.

MR. NORMAN COLLYER (Southern Pacific Company): Dr. Steinmetz, delegates and ladies and gentlemen: I deem it quite proper in connection with the subject before the Convention to inquire into the meaning of the term "Allied Institutions." It seems to me that it should be defined as an organization or institution which has an interest, either primary or secondary, in the problems of industrial education. Such an institution may be composed of those who receive education, or of those who impart education, or of those who profit by education; in other words, of the employe, the educator or the employer.

There is a fourth class of Allied Institution, namely, those semi-charitable or eleemosynary organizations which are supported by the private rather than the public purse, and have for their object the betterment of social conditions. Of this class the Department Store Education Association of New York is a notable example.

Naturally each genus of institution will view the problems before it through its own special kind of goggles. The employe, when he unites with his fellows to an extent which may be termed an institution or an organization, is generally concerned as to whether or not the influx of educated men is likely to jeopardize his wage. The educator is more concerned with the ways and means of his profession—that is, the technique of teaching; and the employer is concerned with education because it pays, whether it pays in intangibles, as Dr. Steinmetz puts it, or whether it pays in direct profits, he is beginning to appreciate that it is to his interest to employ educated and trained men, and that ignorance is a waste.

Now there is one common ground on which such organizations can unite, namely: In the collection of existent facts; whether you term it a survey, an assay, or an investigation, all the facts are there, and if truthfully set down they cannot help but trend to a consensus of opinion in the conclusions deduced.

The suggestion made by one of Mr. Roosevelt's correspondents, that these questions be considered by joint committees that can sit down together and discuss the subject, appeals to me with peculiar emphasis because that is the method which has proven highly successful in the railroad business, a business with which I am most familiar. When the facts are collected, the use made of them will naturally differ among the different institutions, and it is advisable for us before entering into an alliance with other institutions to investigate them,—investigate the investigators, determine their aims and their purposes. Hence I would strongly urge that each one of you constitute himself or herself a committee of one to look up the institutions which have a primary or a secondary interest in industrial education in your particular territory, and report to the Executive Secretary or to the Chairman of the Committee on Allied Institutions their names, their purposes, their organization, their membership and the standing and character of their members.

The committee has had brought to its notice a surprisingly large number of such organizations. They are springing up all over the country. And it is indicative, more than anything else, of the importance of the problem and the interest which is taken in its solution. A great many of these organizations are in their infancy. As the secretary of one of them wrote to me:

"We haven't yet decided how to attack the problem," and that was an association of men of prominence and standing in California. Their potentiality in moulding public opinion cannot be measured. We have here a virgin soil ready to our hand; hence, let us strive to make them not merely related institutions, but truly allied with our efforts, our aims and our ideals. I thank you. (Applause.)

President Steinmetz: I now call on Dr. Galloway to say a few words to us.

Dr. Lee Galloway (New York University): Mr. Chairman, it gives me pleasure to speak to the members of the Association for a few moments this morning on the subject of Allied Institutions. I shall not attempt to give an exhaustive account of these institutions, as the subject is treated at some length in my written report.

Two years ago, I spoke to you upon the work of the New York University School of Commerce, with particular reference to its work in accounting, finance and commerce in general. Since then there have been two developments in the work of the School: one in the direction of vocational training for advertising men, the other, training for journalistic work. The advertising training is in charge of Mr. Tipper, one of our members who, I hope, will tell us something of his work.

Recently, three further possible developments have presented themselves which will claim our immediate attention. The first concerns training for foreign trade, the second consists in bringing about closer relation and co-operation with the men on Wall Street, while the third includes the establishment of vocational training or of a class in vocational guidance.

In connection with the work in foreign trade, classes were conducted this year which were interesting and well attended. For the coming year, the School expects to give what it calls "business fellowships." These fellowships will apply not only to training for foreign trade, but to other fields of business activity. The plan is briefly this: the School has enlisted the co-operation of several big business organizations,—the United States Steel Corporation, the National City Bank, the Standard Oil Company and others of equal rank. Through the University these companies offer business fellowships to young college men from all over the country. This means that the company will take the man into its employ, pay him a salary and receive his services during half his working time while he devotes the other half to the study of subjects germane to his work with the company, in the School of Commerce. Twenty or twenty-five of these fellowships have been offered and more will doubtless be forthcoming. This work is interesting, valuable and so far as we know, unique.

To keep in closer touch with the men "on the job" in Wall Street, there have been established classes which met down town and which have been conducted by instructors from the School of Commerce. Seven or eight of these classes were held last year with an average attendance of fifty to seventy-five. Business corporations gladly furnish the necessary rooms for class use and show a spirit of cordial co-operation.

The work in vocational guidance is as yet in its incipient stages. The instructor in charge of the class is a man of experience, both in teaching and in business, Doctor Gowin. It is proposed to put the young high school boy just entering college under Doctor Gowin's guidance so that his college work may be planned with some idea of fitting him for a position when he graduates and so save him the trying experience of many college men who find themselves without prospects when the college doors close behind them.

So much for the University work. There are three other activities in which I am concerned and to which I should like to call your attention.

The first is the educational work of the National Commercial Gas Association. For four years the Association has been doing educational work which has gradually developed from a single course on personal salesmanship to a well-organized three-year course. This latest course is divided into two parts: the first six months is devoted to general instruction which will include mathematics, business English, elementary chemistry and physics, etc.

At the end of six months, each man enrolled is allowed to choose which of the five specialized courses he will take for the balance of the three-year term. These courses are as follows: for commercial managers, for industrial fuel and power specialists, for lighting specialists, for accountants and for general salesmen. I have been glad to include in the report a complete description of this valuable work.

The Department Store Education Association presents another vital phase of vocational training. Through this Association, the department stores in the City of New York are waking up to the importance of education for their employes. The work has been ably planned and carried out. Miss Kennard, the director, is with us today. I hope she may be induced to give us the details.

Last winter in New York, we organized the Commercial Education Club, the third agency for training of which I wish to speak. This club is an association of business men and teachers who aim to bring about a closer relation between the teaching of commercial subjects in our commercial high school and the actual needs of the employers who engage the graduates. As this work develops I feel confident that much can be done to increase the efficiency of the average boy or girl who leaves the commercial high school for a business position.

I feel that from each and all of these allied institutions, The National Association of Corporation Schools may draw help and inspiration for continued and useful activity.

Thank you.

"WORK OF THE DEPARTMENT STORE EDUCATION ASSOCIATION"

By Lee Galloway, Ph.D.

Member Board of Directors of Department Store Education Association

Through Miss Beulah E. Kennard, Educational Director, I have been able to present the following account of the work of this new organization in the field of Corporation School Education.

The object of the Department Store Education Association as stated in its prospectus is twofold:

1. To study at first hand the methods and conditions of Department Store employment.
2. To develop salesmanship as a skilled occupation.

The study of department stores, their organization, management, methods of wage payment and promotion from one position to another was begun about two years ago as the Association felt the need of exact knowledge which it was unable to secure from any previous reports or printed matter on the subject. A careful study of one store was made during a period of seven months with the cordial co-operation of the store management. One other complete store survey and nine studies of the waist department in a series of stores have given the Association much material upon which to base its educational plans, but the study of promotion actual or possible from one department to another has only begun.

Last July a group of about one hundred saleswomen from five departments of Lord & Taylor's were formed into classes for the study of departmental problems as well as the promotion of efficiency among the members of the group. One-third of each department came to the classes each day for an hour and a half. Owing to the unusually prolonged vacations due to war conditions the attendance was very irregular, but the result of concentrating attention upon a few departments and taking all the members of these departments in turn gave the Association a clear idea of the greatest deficiency in departmental store salesmanship. The girls did not know the goods which they were selling. When a course in salesmanship was outlined therefore, it began with the classification of stock in the various departments of the store and proceeded from that to the materials and qualities of that stock, its color, form and style and finally its arrangement and care. Of next importance was made the study of the customer and her needs, commercial ethics and store system.

As a result of its earlier observations an outline course was presented to Stern Brothers with whom the Association has been working since the first of February. The classes have been composed of experienced saleswomen who were given a knowledge of their departmental requirements which gave a new dignity and importance to their work.

Efforts to improve the conditions of department store employment have passed through three definite stages. They began with a recognition of the fact that so many bright American girls who are employed behind the counter remained year after year in about the same place and that their work was neither very interesting to them nor very well done. But, because it happened to be a time when good sanitation, shorter hours and recreation were being given a great deal of attention the Department Store as well as other businesses employing women began to have welfare work. This was an excellent movement so far as it provided good surroundings, wholesome luncheons and rest rooms and medical care for the sick, but it has always been a little patronizing and even where there are clubs and gymnasiums, they make store life pleasanter, but do not help the girls to advance to higher positions or increase their efficiency.

The second stage was the training of the inefficient girl, the correction of errors, and giving very good and practical instruction in the art of salesmanship to a group of selected girls from one or several stores. This salesmanship training is now going on in many places and ambitious girls are taking it even though they were doing good work in their departments before, and it has had excellent results. The idea of training has now been generally adopted.

This study of the job of salesmanship and the effort to give it professional standards, marks a third stage.

We have allowed girls to do all kinds of work without proper training because we have thought that they would soon be married and we could give them a cheap education for a temporary job, but this condition must be changed in the department store as elsewhere. While there are many agencies now giving salesmanship courses the characteristics which distinguish the work of the Department Store Education Association from other similar work are the following:

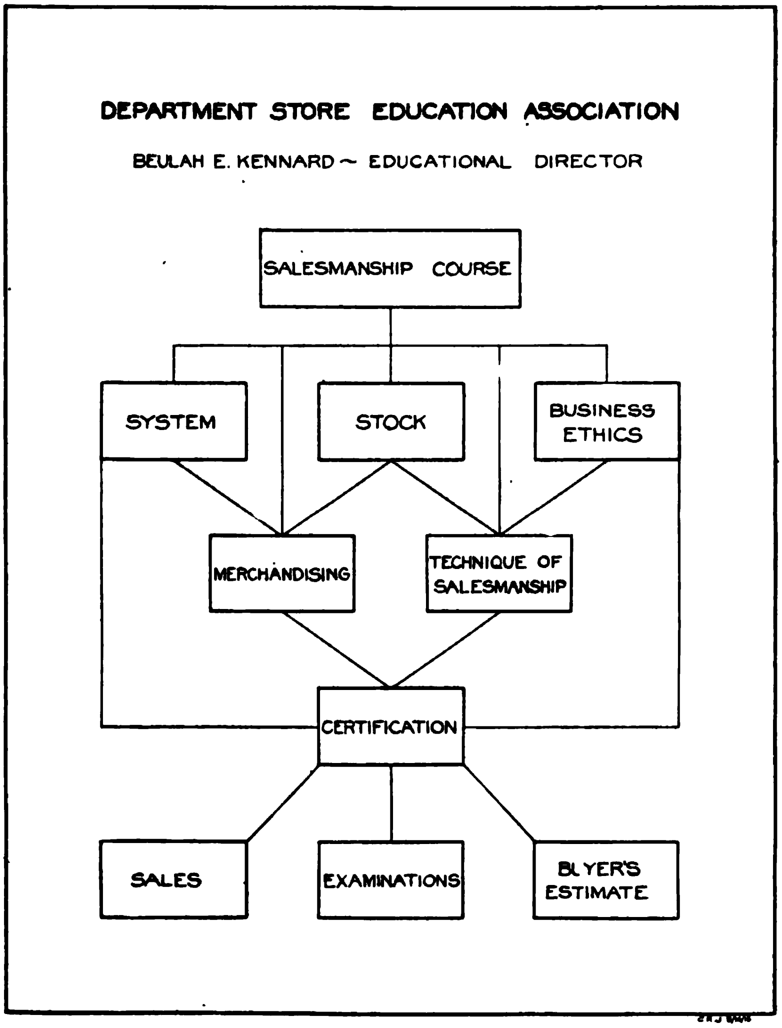
1. The centering of attention upon the job of salesmanship in order to make standards for the girl who must be fitted for her work.

2. The study of store departments separately and in their relation to each other.

3. A standard course of instruction adapted to each department.

4. A certificate which recognizes and standardizes the educational work.

The Association has within the past two weeks given certificates for departmental knowledge and efficiency to forty-four students who had added this educational course to their regular duties in the store. Another class composed of seven allied departments is in training and it is hoped by this method to put all the departments on a higher plane of salesmanship as well as to open up the lines of promotion to all ambitious saleswomen. To do this for others outside of the groups reached personally text books will have to be written and when standards have been set an alliance must be made with the Public School system of the city, but this will naturally follow.


DEPARTMENT STORE EDUCATION ASSOCIATION
BEULAH E. KENNARD ~ EDUCATIONAL DIRECTOR
SALESMANSHIP COURSE
SYSTEM
STOCK
BUSINESS ETHICS
MERCHANDISING
TECHNIQUE OF SALESMANSHIP
CERTIFICATION
SALES
EXAMINATIONS
BUYER'S ESTIMATE

COURSE IN SALESMANSHIP

STERN BROTHERS

- STOCK
  - Classification in department.
  - Materials and qualities.
    - Silk, cotton, leather, straw and felt, etc.
  - Arrangement and care.
  - Color, form and style.
- SALESMANSHIP
  - Types of customers.
  - Approach to customer.
  - Closing a sale.
  - Demonstration sale for discussion.
- MERCHANDISING
  - Quick selling and profits.
  - Store policies.
  - Waste.
- COMMERCIAL ETHICS
  - Relation of employes to store.
  - Relation of employes to each other.
  - Relation of store to its customer.
- SYSTEM
  - Rapid calculation.
  - Fractions, discounts, etc.
  - Business English.
    - Grammatical errors.
  - Geography of New York.

"WORK OF THE COMMERCIAL EDUCATION CLUB"

By LEE GALLOWAY, Ph. D.

Secretary-Treasurer, Commercial Education Club of New York

When an old building is being wired for electricity, it is necessary that the connections be good, the insulation perfect, or there is likely to be a fire. It is likewise necessary to guard the lines of connection carefully, when any body of men attempts to connect old established social institutions with new ideas.

For some years past, a number of educators, of whom Dean Schneider of Cincinnati University is a fair representative, has been attempting to connect the business world with the old established educational methods of instruction. Beginning with the engineering schools he succeeded in tying them closely with the practical, every-day life of the machine shop. This has produced such good results that it was thought well to use his method of co-ordination in bringing about a closer union between the commercial business activities and the public schools.

Finally Dean Schneider and Mr. Wirt were brought to New York to act as experts in the planning of means by which the high schools might be brought into closer harmony with the business conditions of that city. So far as New York City is concerned, this is only one of the evidences that the public is intensely interested in vocational training. There have been various committees in the past and even at present which are made up largely of business man who have co-operated with the school teachers in developing practical methods of teaching commercial subjects; but New York is a very big city and any one of these efforts which might have been large enough to have drawn some of the smaller communities into a united support of its measures is generally lost sight of or only locally effective in the case of the American metropolis.

To give some coherence to these many efforts a successful attempt was made last winter to organize an aggressive commercial education club which would act as a clearing house where these various educational activities could express themselves.

The first work of the Club was to investigate the teaching of stenography in New York High Schools and to report upon the desirability of making this subject a required subject in commercial high schools in the city. This report when published, disclosed some surprising facts regarding the part stenography plays in the efforts of students in securing their first business positions and the subsequent success of students who had specialized in this subject.

The Club is now preparing an extensive plan whereby the new co-operative movement between the high schools and business houses may be effectively carried out. The committee which has this in charge is composed of prominent high school men and an equal number of well-known business men who have a special interest in the matter. The following letter and questionaire will disclose the lines of attack of this Association:

PURPOSE OF THIS PAPER

To Help Business By Helping the Schools to Fit Pupils for Business

It is assumed that this is a purpose
worth the attention of business men.

This questionaire is prepared by

COMMERCIAL CLUB OF NEW YORK,

an organization made up of business men and teachers in the commercial high schools of New York City Department of Education. The Club will appreciate any information or suggestion that will help it in the work of making schools and business better understand one another.

FREDERICK C. BATES,
General Electric Co.,
President.

LEE GALLOWAY,
New York University,
Secretary.

The following outline was suggested by an examination of actual conditions as they affect employment and promotion in establishments having large numbers of clerical workers of all grades.

Note: It is recognized that categorical answers may often be misleading; any qualifications you may desire to make should appear in notes on supplementary sheets.

I NATURE OF BUSINESS....................................

Number of workers in the departments covered by the answers:

Men.......... Women..........

II EMPLOYMENT

1 What is your usual method of obtaining new employes?
   - a Through advertisements?
   - b Through employment agencies?
   - c Through officers or employes?
   - d Other methods?

2 Are any of the following conditions required of applicants for employment in your establishment?

Elementary school graduation?

High school graduation?

Yes No

Previous experience in business? —— ——

Knowledge of stenography —— ——

Knowledge of typewriting —— ——

3 Is there an apprenticeship system in your business —— ——

(By an apprenticeship system is meant any plan for training young workers which gives them a comprehensive understanding of the business.)

4 Have you a set of tests or questions for applicants for employment —— ——

(The committee would appreciate the receipt of copies of such application blanks, tests, questions, etc., as the employers may care to send. All such papers will be treated as confidential if desired.)

5 Have you any age limits for those entering your business:

Not less than ....years.

Not more than ....years.

Yes No

6 Do you give preference to high school graduates? —— ——

7 As an applicant who had some slight training, without high school training, would you prefer one without such business experience but with high school training? —— ——

8 Workers who start in your business without previous experience receive not less than $...........per week.

9 What are the average number of working hours per week?...........

10 Is there any night work? —— ——

Is there any overtime work? —— ——

Is there any extra pay for overtime or night work? —— ——

Yes No

11 Saturday afternoon is a half holiday during the months of..................
....

12 Employes receive a vacation of ...... weeks with pay? —— ——

13 Is the work seasonal? —— ——
If so, (a) the busiest period is..........
(b) the slackest season is.........

III PROMOTION

1 Promotion in the service is based upon
- a Length of service —— ——
- b Record of punctuality and attendance —— ——
- c Work of records; accuracy, quantity, etc. —— ——
- d Influence of friends or relatives —— ——
- e Departments to which assigned —— ——
- f Combination of above factors —— ——
- g Other considerations —— ——
- h Have you any definitely formulated policy of promotion not based on any of the foregoing? If so please state —— ——

2 Do high school students seem to be promoted more rapidly (that is, advanced to more responsible positions) than others assigned to similar work? —— ——

3 Do high school students (graduates) seem to advance more rapidly (that is, increase their wages more rapidly) than others? —— ——

4 Do high school students (graduates) seem to advance further (that is, attain to higher levels of pay or to more responsible positions) than others? —— ——

5 Do high school students (graduates) in your employ seem to be more adaptable than others? —— ——

6 Do high school students (graduates) in your employ seem to be better disci-

Yes No

plined than others, as shown by punctuality and regularity of attendance? —— ——

Promptness in getting to work (getting busy on the job when the bell rings) resistance to distractions, the spirit in which they take criticism, etc. —— ——

Loyalty —— ——

Definiteness of ideals and principles —— ——

7 How do high school graduates compare with business school graduates?

IV OPPORTUNITIES FOR CO-OPERATION

1 Do you believe that your business will permit high school pupils to fill positions in your office by having two pupils alternately displace each other at weekly intervals? —— ——

NOTE: This is now being done extensively in many establishments.

2 If this plan seems to be not adaptable to your business, please state the chief difficulties.

V OPPORTUNITIES FOR CONTINUATION WORK

Do you believe in allowing your employes to attend afternoon sessions of two, four or six hours per week in schools for technical instruction of a kind you would approve? —— ——

VI INTEREST OF BUSINESS MEN IN EDUCATION

Are you sufficiently interested in the problem of bringing teachers and commercial business men more closely together by becoming a member of a club or association of limited members made up of commercial houses and teachers of commercial subjects? —— ——

EDUCATIONAL COURSES
NATIONAL COMMERCIAL GAS ASSOCIATION

By Lee Galloway, Ph. D.
Chairman of Board Educational Control National Commercial Gas Association and Director of the Course

One of the first great economies, which appears to the minds of those engaged in work that is largely social in its nature, is that gained through combination and co-operation. No doubt the amount of effort and energy saved through such reading courses as are put out by the Alexander Hamilton Institute for the training of executives, and correspondence courses of the Sheldon School and the International Correspondence Schools has been very great. Similarly, we may point to the correspondence work carried on by some of our large universities; but perhaps the newest development along this line is the educational work done by the National Commercial Gas Association at its headquarters in New York City.

This is one of the most extensive attempts on the part of a whole industry to standardize a course of study for commercial men in its business. As this course of instruction is somewhat unique in the field of corporation school education, it may be of interest to state the conditions under which the course has been developed and to show somewhat in detail the nature of the work covered in the various courses of instruction.

First, it should be noted that the gas company is a quasi-public business organization; second that the various business units where the city is taken as the basis, are not in competition with each other; third, that their commercial activities consist of two lines of product, namely gas and the appliances pertaining to the utilization of gas; fourth, that the business units are of various sizes, ranging from the enormous gas companies of New York, Boston, Philadelphia, Public Service Corporation, etc., of the East to the small gas plant of some village community in North Dakota; fifth, that the students vary in their preparation from the college graduate to the man who left school in the third grade; sixth, that these students are mature men and women.

Since the gas company is a public utility organization, it is necessary to consider first of all the intimate relationship which exists between the gas business and the public. Consequently, the idea of service has predominated every lesson which has been put out. The employe who should be successful in putting in an extensive installation for the company might easily have saddled a liability on the company which he served rather than an asset because he did not take into consideration the quality or the quantity of service which was best suited to the consumer's needs in the long run.

Although every business of today must consider service as the guiding principle of its merchandising policies, in a gas company, if we take into consideration the trend of public opinion today, it is not only necessary, but there is no alternative policy which it might adopt. After the best point of attack from a philosophical view was decided upon, it was necessary then to consider the nature of the business from a competitive point of view. It was realized that one of the great drawbacks which stands in the way of most corporations when considering the adoption of an educational scheme for its employes was the fear that their competitors would get the benefit of their efforts by drawing the employe to them after he had received his instruction. The men in the gas business, however, soon realized that the trouble was not in competition with Atlanta and that the well trained employe, no matter where he might land after his course of instruction would be a credit to the gas industry and furthermore, that it would only be a short time before this natural interchange of employes would become mutually beneficial. The absence of any narrow competitive policy has been especially noticeable in the support which has been given this educational movement.

Having considered the environment which should determine the nature of the instruction to be put out, it is then necessary to determine the character of the product which is sold. Here it will be noticed that there is a main product and a subsidiary line which must always be kept in mind. The main product is the sale of gas and gas service while the secondary line is made up of those appliances through which this service must be rendered to the consumer. It is not difficult to bring out the competitive advantages of gas and to instruct the salesmen and other commercial men as to its nature and marketing possibilities, but when it is considered that the service which is rendered depends upon the use—and the correct use—of the right appliance, it will be seen that the study of the secondary line of product became the essential line of attack. This was not seen at first, as the outlines of our first two courses show:

COURSE I. Gas Salesmanship.

1. The real salesman and the near salesman.
2. Practical and personal elements in selling gas.
3. Four steps in selling.
4. The customer's attitude toward a sale.
5. Building a selling talk.
6. Building a selling talk, continued.
7. Turning technical matter into selling points.
8. Selling gas on a large scale.
   Part 1. Factory illumination.
9. Selling gas on a large scale.
   Part 2. The factory and the store.
10. Selling gas on a large scale.
    Part 3. Gas for industrial purposes.

COURSE II. Gas Salesmanship.

1. The salesman and the corporation.
2. The sales department and the organization.
3. The basis of departmental organization.
4. Elements of gas manufacture for salesmen and commercial men.
5. What the commercial man should know about distribution.
6. Elements of gas accounting and purchasing.
7. Orders and dispatch.
8. Organization of the sales department.
9. Advertising and special campaigns.
10. Company policy and public relation.

It was not until the third year that the Board of Educational Control fully realized that the weak spot in the gas employes' commercial ability lay in their lack of knowledge of the appliances which they were selling. They at once put out the third course of lessons, entitled, The Utilization Course, in which all the practical appliances through which gas might be served to the customer were described not only in their structure, but in their use—always keeping in mind the prime selling points connected with them. That this course was a very desirable one from the point of view of the employe, is shown in the increased size of the enrollment for that year which jumped from one thousand to nearly four thousand and which resulted in the issuing of over one thousand diplomas to men who completed the full year course. The nature of this course is indicated by the following lessons which average about eighty pages to the lesson:

COURSE III. Utilization of Gas Appliances

1. Domestic cooking appliances.
2. Illuminating appliances: the production of light. Supplementary pamphlet: Elementary principles of combustion, and utilization of energy, units of light and illumination and principles of light distribution.
3. Illuminating appliances: planning light installation.
4. Circulating water heaters for domestic purposes.
5. Instantaneous domestic water heaters; multi-coil storage system and instantaneous bath water heater.
6. Hotel and restaurant appliances.
7. Street lighting.
8. House heating appliances.
9. Miscellaneous gas appliances.
10. Principles of industrial fuel.

These lessons were not all elementary and as a consequence this showed the Board of Educational Control that most of the students were vitally interested in the fundamentals of the gas business and finally induced the Association to develop its new course which it is putting out this year.

In the preparation of the new course, somewhat more attention has been given to the pedagogical problems connected with it. These problems are chiefly connected with the fourth, fifth and sixth conditions stated above. Thus it was necessary in preparing our new course on accounting for gas companies that the small business unit represented by the individual owner be given consideration as well as the large consolidated and holding companies. A perusal of the outline for the accountants and the office men will indicate how we met this problem.

The most difficult problem was that of making the lessons fit the various degrees of student preparation found among the employes of the various companies. To do this, it was necessary to make the lessons as simple as possible and not violate any principle connected with manufacture, distribution or selling of gas. Thus the course of instruction which has been made to extend over three years was divided into two periods. The first six months are given up to a study of the fundamental principles connected with the manufacture and distribution of gas and the generation and distribution of its chief competitor, electricity. Along with these lessons go text books, covering only such instruction as is necessary in arithmetic, grammar, chemistry, etc. The following schedule will indicate the material covered in the first six months of the work:

SCHEDULE OF SUBJECTS

Reference Papers

A. *Mathematics—Arithmetic:* This will cover addition, subtraction, multiplication, division, fractions, square root and cube root, together with all such material as is necessary for the average inside and outside gas man in making his computations in arithmetic.

B. *Business English:* This reference paper will embody the reasons for the use of accepted constructions in writing, and the explanations of corrections of common errors in speech, etc. The student will refer to the reference paper so that the lessons which are to be sent out in separate pamphlets each month may be thoroughly understood. The parts of speech and their functions in the sentence will be explained.

C. *Chemistry:* These references will show what is meant by chemical action, will cover the various elements in several of their more important compounds and will embrace reactions, both in the manufacture and purification of gas. In addition to this, a chapter is devoted to thermo-chemistry covering the chemistry of flames, etc.

D. *Physics—Properties of Matter:* This paper will cover the fundamentals necessary for the understanding of paper G and will include the subject of specific gravity, etc.

E and F. *Physics—Magnetism and Electricity:* These papers will treat of magnets, electrical charges, currents, batteries, motors and dynamos, lamps, and will cover the fundamentals necessary for the understanding of the lessons on Generation and Distribution of Electrical Energy. (3 and 4.)

G. *Physics—Elementary Mechanics:* In this paper will be explained certain simple fundamental ideas connected with force, weight, velocity and energy as well as the principles of levers, gears, pulleys, screws, etc.

H. *Algebra:* The meaning and use of algebraic symbols will be considered; also addition, subtraction, multiplication, division, fractions and practical applications will be made.

I. *Mensuration and Geometry:* This paper will go into the measurement of length, area, volume, angles and lines, surfaces and solids.

J. *Physics—Heat:* Here will be embodied the nature of heat—conduction, convection, radiation, expansion and contraction.

K and L. *Physics—Light and Sound:* The nature of light and sound will be discussed: its production, transmission, absorption, reflection, etc.

STUDENTS BEGIN ON PRACTICAL PROBLEMS AT ONCE

After the Board of Directors of the National Commercial Gas Association had decided definitely to carry out the new courses, a schedule of subjects was roughly mapped out, and this was issued to members. Since that time, the Association has modified the course of instruction in several essential ways. The first thing to be noted is that the member may begin at once upon the study of the practical problems connected with the gas business.

LESSONS ON GAS MANUFACTURE

The lessons begin with a lecture on the manufacture and distribution of gas, which has been written in a simple way and strictly from the commercial man's point of view. This lesson which is illustrative of all which follow, will contain problems involving elementary calculations in arithmetic and reference to certain chemical and physical laws, an understanding of which is within the comprehension of any one capable of selling a gas appliance. No technical language is used, but for the information and encouragement of those men who wish to go somewhat further into the "reason why" of things, references are made to the special papers on these subjects. Here the member will find a simple, non-technical explanation of certain chemical and physical phenomena connected with the gas business.

BUSINESS ENGLISH

Along with the lecture on gas manufacture will go a lesson on business English. This lesson will impress upon the employe the necessity of legibility in handwriting. There will be a number of important rules governing the making of letters, figures, etc. Exercises are given by which the student may improve his handwriting. This lesson will impress the fact that by conforming to these rules there will be great saving in time and money to the gas company. Punctuation, common errors in speech, accepted methods of expression, etc., will follow.

GAS MATHEMATICS

In making the reference books on mathematics the committee has taken great care to select a large number of practical problems applying to every part of the commercial man's activities in and out of the office. They feel that the value of these problems does not end with the simple exercise in performing the calculations, but that the method of conveying information to the mind of the member through problems is one of the best means that can be adopted. The amount of attention which the employe must put upon the facts connected with the gas business in order to solve his problem is the best way to insure the retention of these facts in his mind.

PURPOSE OF THE REFERENCE BOOKS

All the subjects which were mentioned in the original syllabus are to be written according to the method employed in the arithmetic, but all these texts have been subordinated to the practical lectures on the gas business. Experience has shown during the past three years that this is an economical way of handling the hundreds of questions which the men are continually asking about certain fundamental principles. Instead of writing a personal letter taking up several pages, the examiner can refer the member to the reference books quoting page and paragraph for this explanation. This answers the objection raised to the inclusion of many subjects which are not germane to the selling of gas. They have been subordinated to a position where they will neither discourage the men nor give them the impression that they have become masters of the technique of the business because of a little study.

THREE IMPORTANT POINTS

In the new arrangement of the course, the following should be noted. The man will begin at once to study the practical problems of the gas business.

1. He will begin to learn essential facts about the manufacture and distribution of gas and the utilization of gas appliances, such as gas stoves, heaters, lamps, etc., the knowledge of which is of value to the salesman or office employe.

2. The subjects of business English and arithmetic will become the centers about which the course will attempt to develop the general efficiency of the employe. Each month the employe will receive a written lesson on the subject of business English as applied to the gas industry. In the planning of this business English course, the first lesson will, as has been stated, deal with the importance of legible hand-writing. From this basis the lessons will be built up to the principles underlying the making of a report by a subordinate to his superior officer. Accordingly, the stenographic, telephone, order and complaint departments, and the principles of business letter writing, etc., all receive due attention. Practice exercises will be given the men with each lesson and their test papers will be marked and criticized.

3. Finally it will be noted that the first six months' work will be common to all classes of employes. Through all the lessons will run the selling talk which will be specially applicable to salesmen, but at the same time will draw the attention of any employe who may take the course, to the importance of continually keeping the consumer and the public in mind. At the end of the first six months, the lessons and lectures will be prepared with the idea that the interests of the several types of employes tend toward some special line of work. Accordingly, (1) the general salesman will be given lessons pertaining to the utilization of gas appliances, beginning with cooking appliances and ending with a treatment on the general characteristics of power, fuel and lighting appliances; (2) the power and fuel specialists will have a special series of lectures pertaining to their field; (3) the lighting specialists special lessons and lectures on theirs; (4)

the accountants and office men will specialize in office systems and bookkeeping, and (5) those contemplating advancement for commercial managerial positions will receive instruction in sales promotion, etc.

ARITHMETIC FOR THE GENERAL SALESMAN

So far as the general salesman is concerned, nearly everything in the mathematics section would fall within the limits of arithmetic. He should know how to add, subtract, multiply and divide, whether the numbers are integral, fractional or decimal. Some of these applications might frequently be involved in finding areas of floors or ceilings, etc.

At this point the arithmetic crosses over into mensuration. It is not necessary as a rule, for the general salesman to go much farther than these simple calculations in mensuration, although he may be called upon to calculate the cubical contents of a room. Therefore, the arithmetic, or this branch of mensuration, is extended to include such simple problems as may not be beyond the everyday practice of the ordinary salesman.

ALGEBRA

Regarding algebra, the general salesman will not need to know more than enough to understand that it is simpler to indicate certain relations by the use of formulæ than it is to write them out in the usual terminology. When this has been fully explained to him, the subject, so far as he is concerned, could be dropped. But knowing that this amount of algebra would not cover the needs of industrial fuel and lighting specialists, the salesman's work on the subject of algebra was extended to cover simple equations, explaining the use of square and cube root and the application of proportion.

GEOMETRY

So far as geometry is concerned, there we have nothing more than the extension of the subject of mensuration. There is no attempt to state an hypothesis and prove its conclusion by a demonstration winding up with Q. E. D. To be sure, the lighting specialist should know something of the solid angle, and he should be familiar with the sine and co-sine, but beyond these points the course does not contemplate going.

III

CHEMISTRY AND PHYSICS

It was found in marking the papers of members who were taking the Utilization of Gas Appliances Course that questions were continually arising as to the why and wherefore of certain practices connected with force, weight, velocity, energy, etc. Accordingly, it was thought advisable to treat of those principles of physics and chemistry which would help a commercial man to understand construction and operation of gas appliances.

The scientific references to chemistry and physics which were necessary in the Utilization Course have now been incorporated in a separate text. This facilitates the work of the examiners as well as the students by affording a place where the explanation of scientific principles can be found by only a simple reference to them by page and section when the lesson sheets are being prepared.

ALL GRADES OF STUDENTS PROVIDED FOR

The new outline as arranged will now make the course available to a much larger number of men than was previously possible. To those who have had no high school education or who have not studied the fundamentals, the reference books will provide a vast amount of information which will enable them to gain knowledge to help them in more advanced studies.

Other students, however, will find the more advanced material available to them right from the start and they in turn will be enabled to make corresponding advancement in their studies.

PRACTICAL NATURE OF THE COURSE

These practical courses by correspondence are made so simple and plain both in the choice of essential principles and in writing of the books, lectures and problems that any one with an elementary education can understand them.

Great care has been taken to connect every important principle of the gas business with a practical every-day business experience. The success of the student has been kept in mind every moment in writing these lessons. Only what the gas man should know to become a competent salesman, accountant, office man, or commercial manager is taught.

The student wastes no time in wading through unnecessary reading. Every sentence will remind him of every day experiences and he will find solved for him many difficulties which before he had no means of knowing how to overcome. Not only is the reason for doing things given, but successful ways of doing the things are described. The student has before him continually the best methods used by successful gas men all over the country.

ORGANIZED BUSINESS KNOWLEDGE

But more than this the information is organized. That is what counts in the life of the busy employe of to-day. The fellow who saves time in getting posted and grounded in the facts of his business has just so much advantage in the race for promotion. The gas companies recommend these educational courses because they know the value of organized business knowledge to their men.

GENERAL MAKE-UP

The reference papers furnished with this course are printed in large, clear type, on the best of paper and are adequately illustrated. These books are superior to those sent out by correspondence schools at three times the cost. Moreover, they are devoid of padding because prepared especially for gas men. No useless technical matter is included, thus the books will be readily understood and remembered.

The problems and questions which are mailed each month deal only with the practical side of this subject. The necessary stationery will accompany these. Separate lesson pamphlets, too, will be sent each month. The problems are prepared as far as possible from every-day experiences met in the selling field, in the accounting and general office and in the daily activities of the commercial manager. Not a statement or word is used here that the gas man will not at once recognize as practical and full of earning power for him.

ANSWER PAPERS

The student is required to send in his answers to questions and problems which will be thoroughly examined, criticized and graded. They will then be returned to him that he may know exactly what progress he is making. He will be expected to answer each lesson within four weeks of the time it is sent out.

DIPLOMAS

At the completion of any course the student receives a diploma indicating the special field covered by him. This diploma will be signed by the President and Secretary of the National Commercial Gas Association, by the Director of the Course and the Chairman of the Board of Educational Control. This diploma in a practical way should mean much to the gas company employe who is ambitious to succeed, for it will be strong evidence of merit to any manager.

In writing to the gas employe, the importance of the work is impressed upon him by showing him that men should prepare themselves for a career rather than a job. An hour a day devoted to thought about work is not too much to expect of a man. Really what the taking of this course means is that a man decides that he will think about his work as he goes along every day for three years. If questions arise which he cannot answer he promises to find out before he quits. The course makes it possible for every serious-minded man to do this and experience shows that about three years of organized thinking along with the every day work will fit him to become expert instead of just being able to hold on to a job.

Salesmanship has been the dominant feature of the former educational activities of the National Commercial Gas Association, but three years of experience has shown that there is a demand for just this kind of instruction in other fields of commercial gas enterprise. Accordingly, the Board of Educational Control has extended the work to include the office men and men in other departments as well as the salesmen. Accounting, office procedure and commercial management are now included in the course. Moreover, these years of experience disclose the growing demand for more intensive study of certain fields of salesmanship. Therefore, the Board has prepared lectures which apply especially to the Industrial Fuel and Power Specialists, the Specialists in Illumination, the General Salesman, the Commercial Managers and the Accountants. The gas salesman and the commercial manager have opportunities open to them never before offered in the gas business.

COMMERCIAL EDUCATION IN RELATED LINES AT NEW YORK UNIVERSITY

By LEE GALLOWAY, Ph.D.
Professor of Commerce and Industry, New York University

An announcement was recently made by New York University School of Commerce, Accounts and Finance to seniors in the graduating classes of various universities that a number of Business Fellowships was available for men who desired to take up business as a career. From the great response with which this announcement met, it is apparent that men who are just graduating from college and are looking forward to a business career are searching for some way of entering business that will give them the training which will prepare them for advancement.

The idea of the Business Fellowships which has been worked out at New York University by Professors Jenks and Kennedy is that college men entering business should be specially trained to take up executive positions. Good executives in any line of business are scarce. If a firm can really prepare men to occupy positions of responsibility, they can afford to put considerable effort and expense into the undertaking.

A college man brings to a business career advantages of broad training which should give him more initiative, ambition to succeed, and ability to deal with men in a straightforward and tactful way. This makes him good raw material. It is hardly worth while to take these college men and start them in as gilded office boys and expect them to learn the business themselves. They are trained men and should be given an opportunity to master the factors of a business in a shorter time.

Business Fellowships aim to provide an entrée into business for these men which will give them the opportunity to acquire in two or three years an all-round business knowledge. Their time is to be divided equally between practical work in business and special work in New York University School of Commerce, Accounts and Finance. In business these men will be routed from one department to another in order to give them a comprehensive grasp of the particular business. At the University they will be given special courses along their particular line. For example, if a man is appointed to a Business Fellowship in a banking house which desires to train him as a branch manager abroad, he will be given a knowledge of the various departments in the bank and an understanding of banking practice and routine. At the University he will take up courses in foreign exchange, which are taught by practical experts from the Wall Street section. He will be given work in commercial geography in which resources of various foreign markets will be systematically studied. He will have a course in American industries which should give him an insight into the problems these several businesses have to meet in doing business abroad. He will have a course in ocean shipping and traffic regulations, and tariffs, in foreign banking systems, credit methods, etc. Finally he will have special training in a foreign language which will prepare him to speak the language which he will need at his particular post. It is a well known fact that a great many college men who have had three or four years of German or Spanish are practically unable to conduct any business conversation in these languages. They need training in technical language of business and of every day life handled in a conversational way.

In each particular business in which a man is working under a Business Fellowship he will have work relating to the particular problems which he will face. In the foreign field the need of training men is particularly apparent because there is a great scarcity of American young men who are prepared to take responsible positions abroad.

During the period when these men are receiving their training, business firms are to co-operate in this training and at the same time pay the men a normal living wage of $60 to $75 a month. The men will not be of any actual value to the firms during their period of apprenticeship, but at the close of this period they ought to be of distinct value. The effort is to secure men of unusual native ability for business; men who have had the broadening influence of a college education; and in addition men who are trained in a comprehensive knowledge of their business in both its practical and specialized sides. The difficulty that firms have had in securing alert, aggressive and ambitious men who have the training which will enable them to go ahead rapidly points the need for such an ambitious policy as this. New York University has received over 150 applications from college graduates in a large number of leading colleges and universities. At present about 20 fellowships are to be filled with The National

City Bank, The United States Steel Corporation, The Ingersoll Watch Company, The United States Department of Commerce and several other concerns.

In administering the work of Business Fellowships the University will devote a considerable amount of attention to each specific case. In consultation with the firm in question the men's training will be mapped out. One of the members of the University Committee in charge of Business Fellowships, which in addition to Professors Jenks and Kennedy includes Dean Johnson and Dr. McLeon, will act as the men's advisors and will follow their work both with the company and with the University. It will be training to order. The methods used in the University Courses will be adopted to the needs of the men as far as possible. Business fellows will be taken care of in small classes where the work is specially adapted to their needs.

WALL STREET COURSES BEING GIVEN BY NEW YORK UNIVERSITY

The cordial co-operation which is being given by business men to advance training to their own employes is witnessed by the work which has been inaugurated by New York University in the Wall Street section. For instance, the New York Stock Exchange has donated its smoking room for use as a class room and the Bankers' Trust Company has contributed a commodious office as a class room. The Chamber of Commerce of the State of New York has furnished one of its committee rooms for this use. Classes are held at five o'clock in the afternoon and men ready to leave their offices spend another two hours in hearing lectures.

Several of the courses which have been given with success are courses in accounting, business correspondence, banking, foreign exchange investments and foreign trade. In these classes are many men who are mature, having had considerable experience and success. In the course in banking is a member of the firm of one of the prominent banking houses. Some prominent firms in the Wall Street section have paid part of the fees for their employes who are taking courses. For instance, W. R. Grace & Company have had about 25 men enrolled on such a plan.

The nature of the work in Wall Street may be illustrated by describing the course in Foreign Trade and Shipping which has been conducted by Professor P. B. Kennedy of New York University. The instruction in this course has been shared by a number of men prominently identified with the export trade in New York City. Among the special lecturers who have appeared before this class are Mr. H. R. Eldridge, Vice-President of the National City Bank, Mr. C. F. Gregory, Manager Export and Shipping Department of the International Harvester Company, Mr. Hendon Chubb, member of the Federal War Risk Bureau, Dr. E. E. Pratt, chief of the Bureau of Foreign and Domestic Commerce, Mr. B. Olney Hough, editor American Exporter, and Messrs. C. A. Richards and L. L. Richards of Bowring & Company, export commission merchants. Each lecturer has handled the topics in which he is expert. Those who attended these lectures included men from W. R. Grace & Company, the Standard Oil Company, the Singer Sewing Machine Company, the Merchants' Association, the New York Office of the Department of Commerce, a college professor and others of character.

EXPERIMENT OF THE UNITED STATES STEEL PRODUCTS COMPANY

The United States Steel Products Company, the export selling organization of the Steel Corporation, which has been selling abroad nearly $100,000,000 worth of steel products a year, has undertaken a scheme of education which is new in several respects. They have sent 25 men to New York University School of Commerce, Accounts and Finance, each of whom is taking a single course in a subject related to the work which he is actually doing. The company has paid the tuition and the cost of text books. A careful study was made first of the course in which these men were to be entered. President Thomas himself carefully went over the matter with Professor Kennedy, who has had charge of these men at the University. The effort has been, in the first place, to get men into something that will be of direct value in their own work. An example of the interest taken by the company in this education is illustrated by the attitude of the manager of the freight department. He has selected three of his promising men to take a course in export freight rates. During the term, one of these men was advanced to a much more important position. The manager of the freight department specially asked not only to have the grades of these men sent to him, but also their examination books since he was very anxious to know how they were able to handle such questions as were taken up in the course. The quality of the work they were doing at the University he expected would give him a good index to their general ability.

The advantage of this method is that the men are trained in the class with men who are working for degrees and who are doing systematic work; it is not merely an optional education, where a man drops in to a lecture and gets what he can out of it without making any record. These men, moreover, have only one course which means that they have plenty of time to concentrate their efforts on that subject. And finally the work which the men are doing in the classes is brought to the attention of a manager of a department who has administered the work, and through him to the president of the company. The men who take these courses realize that they are expected to go through with them in a thoroughgoing manner. If they show promise and ability these qualities are brought to the attention of their executives. Although it is too early to know just how the responsibility on the part of the men will develop, the company is willing to go ahead with it, providing the men justify such action. In a large organization where there is a vast amount of routine and where many men have really never had the opportunity to bring themselves to the attention of executives, an opportunity is given for them to show the quality that is in them.

VOCATIONAL GUIDANCE—NEW YORK UNIVERSITY INTRODUCES COURSE

Directors of corporation schools will be interested in a vocational guidance plan which New York University has been working out. It has been felt by the University that too many of its students graduated with the big problem of "What life career?" still unsolved. This causes the student to flounder about a year or two after graduation before he is passably well placed and results oftentimes in a mistake through life. More than this, the University believes that the student, with at least fairly clear vocational ideas, is unable to take advantage of this rich curriculum. Courses in commerce, journalism, law, pedagogy, medicine, engineering and the like are offered in abundance, but the students need some life career as a standard before they can elect among them wisely.

Employment managers and educational directors will con-firm the University in its belief that the ordinary college education does not hit the mark as it should. These men have talked with the college graduate seeking employment and they know he shows little discrimination in his search for a vocation, applying for widely different positions and in the most varied businesses. With all his education, so far as practical affairs are concerned, he is untrained. Yet he does not want to start at the bottom.

It is accordingly of interest to us to know that New York University is keenly alive to the problems of the college man and his life career and that it accepts as of primary importance the problem of successfully adjusting him to his vocation. The method by which the University carries out this plan is twofold: First, it schedules its courses in commerce, law, journalism and the like in the late afternoon and evening so that they may be attended by men who hold regular positions during the day; second, it offers to the freshman a course in vocational guidance.

VOCATIONAL GUIDANCE

The object of this course is to aid our students in adjusting themselves successfully to their life work. The class first studies the characteristics of a good vocation and then the opportunities for a college trained man in merchandising, manufacturing, law, medicine, journalism, accounting, teaching, engineering, agriculture, real estate, contracting, public service, etc. Those occupations in which the class is most interested are studied in greater detail. Occasional addresses are also made by men of prominence in their respective vocations.

After he has considered the various occupations the student will be called upon to choose his own vocation at least tentatively. He will be aided in this by conferences with the instructor, by analysis charts, and by the Employment Bureau. Lectures are also given on how to write letters of application, to interview prospective employers and the position once secured, to do the kind of work which means advancement.

It is expected that the Employment Bureau will be able to place all capable students. Their work in the position accepted will be supervised until it is believed that a successful adjustment to the occupation has been made. First and second terms. Two sessions.

The location of New York University at Washington Square in the heart of the city offers its students an unsurpassed vocational opportunity. Men can secure positions in retailing, journalism, accounting, wholesaling and factory work and still be near enough to reach the University readily for their classes. If, as the University now plans, its students as freshmen give serious consideration to the life career problem and are kept earnestly toward its solution, it seems reasonable to believe that we have here under way a movement destined to assume great importance.

When the colleges of this country swing around to this new point of view, the preparation of students for their life careers, and accept as a test of their teaching the degree in which their graduates do succeed in practical affairs, we shall have done something highly significant. The college graduate, the employment manager, the educational director and through them, business in general, will be benefited.

BRIEF DESCRIPTION OF COURSES

FOREIGN EXCHANGE

This course deals in a practical way with the causes and effects of fluctuations in the rates of exchange and kindred topics now acquiring a particular importance in the light of the present extension of our business and exchanges. Instructor in this course is Mr. Christian Djorup, C.P.A., B.C.S. Total enrollment in the course—59.

BUSINESS ENGLISH

This course deals with the particular types of written matter used in actual business practice, such as the handling of correspondence, writing of prospectuses, reports, etc. The instructor in this course is Mr. Edwin Jones Kilduff, joint author of the "Handbook of Business English." Total enrollment in the course —36.

COMMERCIAL SPANISH

This course comprises direct training in Spanish for business purposes. All the work of the course is conducted in Spanish. The instructor in the course is Mr. Santiago Iturralde, who is in charge of all the work in Spanish in the City National Bank. Total enrollment in the course—22.

FOREIGN TRADE

This course consists of a series of lectures given by men in active work in the field on which they spoke. The course is under the general supervision of Professor Philip Kennedy. Among the special lecturers were Dr. E. E. Pratt, head of the Bureau of Foreign and Domestic Commerce, Washington, D. C., E. C. Porter, manager of the New York office of that Bureau, Mr. L. C. Richards of Bowring & Company, Mr. Keyes of the National City Bank, Mr. Hough of the American Exporter. Total enrollment in the course—20.

INVESTMENTS

This course undertook a practical study of the underlying principles of investment, with attention not only to the factors that enter into sound investment, but also to the needs of classes of investors. The instructor in this course is Mr. Albert W. Atwood. Total enrollment in the course—15

MONEY CREDIT AND BANKING

This course takes up the study of the principles governing the means of payment and the history of money in this country, and includes, also, banking systems of Europe and the various systems successively in use in this country. The instructor in this course is Mr. Major B. Foster, New York University. Total enrollment in the course—13.

PRINCIPLES OF ACCOUNTING

This course aims to give thorough foundation in the fundamentals of accounting by means of laboratory practice under guidance of the instructor. It is intended to be a general survey of the field useful alike as a foundation for more specialized study in the subject and as a broad training for those who do not intend to become accountants but wish to apply correct principles to their business practice. The instructor in this course is Assistant Professor W. W. Douglas, School of Commerce, New York University. Total enrollment in the course—30.

President Steinmetz: I now call on Mr. Henderschott of The New York Edison Company to say a few words.

Mr. Henderschott: Mr. Chairman, following practically what Dr. Galloway has said and keeping in mind the correspondence and the other sources of information available to your Executive Secretary I am convinced that vocational education has become a fad. It has been taken up by almost every conceivable kind of organization, which has appointed vocational educational committees. I do not believe that we can question the sincerity or desire of any of these organizations; but the amount of work actually accomplished is very small.

It is a good deal like a church or many other associations where it is felt that every one, every member should be on some committee.

We have earnestly endeavored to keep in touch with all the organizations large or small that are attempting to do active constructive work. Dr. Galloway has pointed out some of them.

The National Retail Dry Goods Association has recently secured the services of Mrs. Prince of Boston whose name is undoubtedly familiar to all of you. Mrs. Prince is going to direct the work of the Association, which has, I believe, some six hundred members, for the department stores.

Now it is not material, in my viewpoint, as to whether the department stores come into our organization or go into theirs. The material thing is, will they develop something that will help American industry? If they do, we want them. Or will we develop something which will help the department stores? If we do, we want them to have it. Mrs. Prince has assured me, that they are going to be associate members of our organization so that we will work closely.

Then there is the National Commercial Gas Association of which Dr. Galloway has spoken.

There is New York University, and all of us in New York think a good deal of it. There are also a great many other universities that are getting right out into this field, that are doing just as Dr. Galloway says,—if the pupils will not come to the universities, the universities will go to them.

Now the correspondence of your Executive Secretary's office shows that there was a slight resentment on the part of one or two associations and on the part of one or two institutions of higher education the first year or two after our Association came into the field. One of those that was rather active in its opposition to us has since become one of our most enthusiastic boosters and is a member of our Association. That is a university.

There is to-day practically no opposition to us, and we have undertaken a movement, the real scope of which I doubt if many of us comprehend. To my mind training or broader education is the largest movement that has started in this country since the Civil War. What does it mean? It means that the United States as a commercial nation stood third in the scale on the last date when conditions were normal abroad. It means that we have been pioneering, that we have not trained as we should, we have not taken advantage of our opportunities as we should. To-day, through no fault of ours, or through no meritorious action of ours, we find ourselves in a position that a nation seldom enjoys. What are we going to do with this opportunity? The trained man wins, I don't care whether it is in business, or athletics, in an orchestra or in the army. The man who has discipline and training, the man who can do the thing right the first time, is the man that has sufficient advantage to always win over the other man.

Now American industry has adopted the corporation as the best form for conducting business, as was ably shown by Dr. Steinmetz this morning,—than whom, there is no one more capable of presenting the subject, because he has made a life study of it. Corporations have certain responsibilities,—certain responsibilities to their employes and indirectly, to American industry.

The president of one corporation that has spent twelve or fifteen thousand dollars in promoting this movement was asked what he expected to get out of it; and he said, "I don't want anything out of it, we owe that much to American industry."

Now the public does not quite get that view of corporations; and perhaps, corporations are to blame for it; but we have started a movement so big, that sometimes those of us closely connected with it wonder in what it is all going to terminate. If we could raise the standard of the American working girl and boy just ten percent., the United States would become the leading industrial nation of the world at once. And it has been found, under the corporation schools, where only fairly good work has been done as yet because they have been only in the promotionary stage, that the standard of most of the employes has been raised as much as ten percent, and of many as much as sixty or eighty percent.

What will it mean to our country? What should it mean when all these corporation schools are co-operating with the Universities and the public schools. As for the public schools, they have welcomed us with open arms; their professors, their teachers are coming into my office almost every day and saying: "What can we do to improve our educational work?" And I cannot tell them. That is a sad feature of it. I cannot tell them because our Association has been working backwards. We have been rather conservative. We have realized that in order to build a permanent structure we have had to lay a foundation. We realize that criticism against the public school is an important criticism, but when it was hurled back at us and we were asked how the work could be improved we were wholly unprepared to answer the problem. Our big problem is with the public school, which is calling to-day, calling to us earnestly to tell it how to solve these problems.

Now having such responsibilities and seeing such great rewards for our country and for ourselves, such great possibilities in this movement, I think it is evident that we must move rather cautiously. Industrial institutions, large corporations, will do only as much educational work as they have to do. That does not admit of argument. They are not organized to do educational work; they are organized to carry on business and to pay dividends. That is why corporations are going to help the public schools; we are going to get every other institution that is doing training or educational work to do just as much as we can get them to do; therefore we have no quarrel with anyone. We have simply come into the field as an economic necessity.

This is our problem: Here are these many institutions coming into existence, some of them intending to do earnest constructive work and some that do not intend to do it.

We have our Committee on Allied Institutions with Mr. Roosevelt as chairman. He has done earnest work, he is a "live wire," and he has connections that are almost invaluable to our Association, which, taken with his ability, make him a doubly valuable member. I believe that from year to year his committee will tell us just where we fit in, just what we can endorse. We are going to apply the acid test to every single thing before we do endorse it, so that our foundation will be solid to build upon.

I should be glad, through the Executive Secretary's office, to receive suggestions at any time. Many are coming in, and are being passed on to our various committees which can get in touch with these movements, and see whether or not they are worthy, and if they are worthy how much we can help them and how much they can help us.

PRESIDENT STEINMETZ: Ladies and gentlemen, we have over-reached our time so that I do not think it is possible to continue the discussion this afternoon. The subject matter is a very important one, a question as to what position among all the businesses and organizations of the country our Association will take. I suggest that to-morrow we might re-open the discussion of this subject after we have gotten through with the discussion of the topics which are on the program for to-morrow's convention. In this case, for the forenoon, I adjourn the meeting.

Adjourned until two o'clock p. m.

COMMITTEE ON TRADE APPRENTICESHIP SCHOOLS

Mr. J. M. LARKIN, *Chairman*
FORE RIVER SHIPBUILDING CORPORATION
Quincy, Mass.

Mr. F. W. THOMAS
ATCHISON, TOPEKA & SANTA FE RAILWAY
Topeka, Kansas

Mr. W. L. CHANDLER
DODGE MANUFACTURING COMPANY
Mishawaka, Indiana

Mr. J. W. L. HALE
THE PENNSYLVANIA RAILROAD COMPANY
Altoona, Pennsylvania.

TUESDAY—AFTERNOON SESSION

TRADE APPRENTICESHIP SCHOOLS

TUESDAY AFTERNOON, JUNE 8, 1915

VICE-PRESIDENT JOHN McLEOD, *Presiding*

The Chairman: I have here the rules and regulations which are to govern the conduct of this afternoon's session:

Each chairman shall consume no more than ten minutes for long reports and five minutes for short reports. In order that everyone may have an opportunity to discuss the papers the time allowance for discussion will be limited to not more than ten minutes for announced discussion and five minutes from the floor. Delegates desiring to enter the discussion the second time will be allowed no more than five minutes for this purpose and then not until all who wish to speak have had an opportunity to do so. The Chairman of each committee is to close the discussion and, if he so desires, is allotted five minutes for that purpose. These are the by-laws and I presume you are in perfect will and accord with them.

I take pleasure in introducing to you Mr. J. M. Larkin, who will give you his report on trade apprenticeship.

MR. LARKIN: Mr. Chairman and gentlemen, there is very little need of my saying anything about the preparation of the Committee's work for the year, as it is very thoroughly covered in the paper which I propose to read and which I hope will come within the allotted time of ten minutes.

First, I want to say a word about the members of the committee. Although we were spread over quite a large territory and it was rather difficult work to get in all the information, the various members of the Committee, Mr. Hale, Mr. Chandler and Mr. Thomas, were all very conscientious in working up the report, for which I wish to thank them.

The report of the Committee on the scope of activities for 1914 and 1915, made the following recommendations regulating the activities of this committee for the present year, and suggested that the work proceed as follows:

First.—That a compilation be made, if not already in hand, of the work of at least a representative number of large corporations, which are conducting educational work on behalf of their employes.

Second.—That this compilation include results which have been obtained.

Third.—That with these objects in view, a careful examination be made by each committee of the first two volumes of proceedings of this Association, in order to benefit by the data contained in papers, round table discussions and reports.

Fourth.—That each committee look into the activities of such institutions as the Alexander Hamilton Institute, The International Correspondence Schools and the Sheldon School, in order to determine to what extent the work of these institutions can be used profitably by the Corporation Schools. This recommendation is made because certain corporations are now working in conjunction with these institutions. The investigation along these lines would include a compilation as to the results which have been attained. In this connection it is further recommended that the chairmen of the four committees concerned, jointly draft the letters required in this investigation so as to avoid duplication of work.

Fifth.—That each committee make recommendations as to the text books which are helpful in corporation school work for the courses recommended.

The recommendations of last year's committee to the present committee were as follows:—

First.—That the table showing statistics on schools throughout the country be extended as more information is gathered and more companies report statistics on their schools.

Second.—That further and as complete information as possible be obtained on existing standards of practice, lines of work and the efficiency of present methods.

Third.—That comprehensive maps be prepared showing the geographical locations of schools of both manufacturing and transportation companies, which information may be of assistance to the members in arranging itineraries for investigating or visiting such schools.

Fourth.—That investigation be made of the public school system with a view to assisting in closing the present gap between school and employment and the provision of adequate preparatory educational facilities for those who enter industry.

SCOPE OF 1915 REPORT

Introduction:

In accordance with the above recommendations and instructions the committee has prepared a tabulation of statistics from the questionaires received and has also included this material in a condensed tabular form along the line of that submitted by the committee of last year.

Comprehensive maps have been prepared showing the geographical location of Corporation Schools throughout the United States, and the above with the deductions of the committee and its recommendations to the ensuing committee constitutes this report.

INDEX TO QUESTIONAIRE

Answers received to questions from 20 to 34, inclusive.

The Companies are numbered from 1 to 53 inclusive, the same number applying to the same firm in each case. Following is a key to the Companies which submitted answers to the questions:

1. Metal Manufacturers.
2. Metal Manufacturers.
3. Locomotive Company.
4. Steel and Iron Manufacturers.
5. Automobile Manufacturers.
6. Printers and Bookbinders.
7. Public Service Company.
8. Trade Schools.
9. Manufacturers of Machinery and Tools.
10. Manufacturers of Toilet Supplies.
11. Manufacturing Company.
12. Manufacturer of Electrical Machinery.
13. Woolen Manufacturers.
14. Automobile Manufacturers.
15. Railroad.
16. Typewriter Manufacturers.
17. Manufacturers of Women's Apparel.
18. Hardware Manufacturers.
19. Railroad.
20. Manufacturers.
21. Manufacturers of Chemicals.

22. Manufacturers of Machinery.
23. Marine Constructions.
24. Manufacturers of Machinery.
25. Railroad.
26. Public Service Company.
27. Manufacturers of Electrical Apparatus.
28. Manufacturers of Machinery.
29. Specialty Manufacturers.
30. Manufacturers of Machinery.
31. Marine Constructions.
32. Printers and Publishers.
33. Public Service Company.
34. Specialty Manufacturers.
35. Manufacturers of Electrical Apparatus.
36. Printers and Bookbinders.
37. Insurance Company.
38. Retailers.
39. Railroad.
40. Manufacturers.
41. Manufacturers of Women's Apparel.
42. Manufacturers of Electrical Appliances.
43. Public Service Company.
44. Retailers.
45. Insurance Company.
46. Woodwork Manufacturers.
47. Hardware Manufacturers.
48. Retailers.
49. Publishers.
50. Manufacturers of Novelties.
51. Insurance Company.
52. Manufacturers of Women's Apparel.
53. Railroad.

20.—*What textbooks are in general use?*

Ans.

1. None. Have no trade apprenticeship schools.
2. The text books used in the educational work are prepared by the Educational Director.
3. Largely books of our own compilation.

4. Shop arithmetic, shop mathematics (Norris & Smith) Engineering and shop drg. course as is used by the Univ. of Wis. We supply all other work.
5. Mechanical Drawing—Anthony.
6. Our own applied arithmetic—Wentworth's Geometry; Salisbury's Physiography; Knight's Primer of English Grammar; Mann & Twist Physics.
7. None.
8. Wentworth's Trigonometry only. All other prepared lesson sheets correlating with the shop work.
9. None. There is none in existence suitable for our work. We prepare our own courses.
10 Our company has no system of apprenticeship in the manufacturing departments and no school for new employes entering any of these departments.
11. We have no trade apprenticeship schools and consequently answers are omitted.
12. We do not believe that the use of textbooks is advisable.
13. Use Company's instruction cards.
14. Three of our own compilation and a book "Shop Mathematics" by Holton.
15. Our own make. A few supplementary books are used.
16. None except as reference.
17. We have no trade apprenticeship school.
18. None in general.
19. I. C. S. mostly.
20. We do lecture work, after which open discussions are in order.
21. We use the mathematical textbooks of the Int. Cor. School quite largely.
22. No textbooks are used, all lessons are made on special sheets 8½" x 11".
23. This is done under public school system as night classes, Palmer's series of practical mathematics and other special books.
24. We have no schools except salesmen's meetings which are selling schools. I personally believe no textbooks now available can be used successfully. Must make up special courses to fit each trade.
25. We prepare our own lesson sheets in loose leaf mimeo-

graph or blue print form and use no regular textbook except for reference purposes. The loose leaf instruction sheets give a flexible system adapted to our specific trade needs. Textbooks useful for reference purposes we have found as follows:

Practical Mathematics—Claude I. Palmer—McGraw, Hill Co. (4 volumes.)

Shop Mathematics, Part 1, Arith. Norris & Smith, McGraw, Hill Co.

Advanced Shop Arithmetic, Norris & Craigo, McGraw Hill Co.

Machine Shop Primer, Colvin & Stanley, McGraw Hill Co.

Applied Mathematics, H. E. Cobb, Ginn & Co.

Industrial Mathematics, H. W. Marsh, Ginn & Co.

Shop Problems in Math. No. 1, Breckenridge-Mersereau-Moore, Ginn & Co.

Shop Mathematics, Holton, Taylor-Holden Co., Springfield, Mass.

Industrial Mathematics, Norris & Smith.

Practical Applied Mathematics, J. W. L. Hale, McGraw Hill Co.

Practical Mechanics and Allied Subjects, J. W. L. Hale, McGraw Hill Co.

Shop Mathematics for Machinists, R. W. Burnham, John Wiley & Sons.

Practical Mathematics, C. R. Dooley & W. A. Johnson.

Workshop Mathematics, Frank Castle, Macmillan & Co.

Practical Mathematics, Norman M'Lachlan, Longmans. Green & Co.

26. No text books.
27. I. C. S. for machine shop, Wentworth Algebra, Gail & Mulligan for physics.
28. None.
29. Apprentices are allowed to attend one-half day sessions each week in the Industrial part-time continuation classes at the Cass Technical High School to receive instructions in mathematics and mechanical drawing.
30. None.
31. Norris-Smith Shop arithmetic.

32. The Essentials of Lettering—French & Murklejohn.
Design in Theory and Practice—Batchelder.
Alphabets Old and New—L. F. Bay.
Lettering in Ornament—L. F. Bay.
Handbook of Ornament—Meyer.
Letters and Lettering—F. C. Brown.
Line and Form—Walter Crane.
Essentials of Perspective—L. W. Miller.
Practical Designing—Edited by Gleason White.
Letter and Letter Construction—Trezise.
Light and Shade—Anson Cross.
Freehand Drawing—Anson Cross.
Design in Color and Printing—Trezise.
Art and Practice of Typography—E. G. Cross.
Alphabets—Edw. F. Strange.
Applied Arithmetic—E. E. Sheldon.
Standard Dictionary.
Webster's School Dictionary.
Desk Book U. S. Gov't. Printing Office.
Practical Typography—Geo. McClellan.
The Monotype System.
The Story of Paper Making—J. W. Butler Paper Co.
Printing and Writing Materials—A. M. Smith.
Color and its Application to Printing—E. C. Andrews.
The Principles of Design—E. A. Batchelder.
New-World Speller—Wohlfarth & Rogers.
Title Pages—Theo. L. DeVinne.
Correct Composition—Theo. L. DeVinne.
The Typography of Advertisements—F. J. Trezise.
Lectures to Printers' Apprentices—School of Ptg., Boston.
Starting—Printing Office—Mallette & Jackson.
Inks: Composition & Manufacture—Mitchell & Hepworth.
America Encyclopædia of Printing—Wilson & Grey.
American Manual of Presswork—Oswald Pub. Co.
Style Book of the University of Chicago Press.
Economic History of the United States—Begart.
Encyclopedia of United States History—Harper.
English Grammar and Analysis—Hart.

33. Enclosed is a list of text books used.
34. Algebra-Wells, 1st. yr. Palmers, 2d yr. Shop Arithmetic:
Norris & Smith,
Norris & Craigo,
A. S. Holton,
Mch'y. Ref. Series,
American Machinists' Handbook.
English—Buglig's Business English. Written accounts of shop work are required each week on Monday.
History—McLaughlin's American History-one-half year, Civics one half year.
Physics—Millikan & Gale, altered by the teacher, L. E. Knott & Co., Manual in Physics.
Shop Assignment—Working up a text. Using catalogs, Machinery Reference Series, American Machinists' Handbook, University of Cincinnati Shop Assignment Sheets and Correspondence School Papers.
35. Wells' Academic Arithmetic, 1st year.
Wood's Practical Grammar and Composition.
Wells' Essentials of Algebra.
Anthony's Mechanical Drawing.
2d year:
Wells' Essentials of Algebra.
Slide Rule.
Gorton's School Course in Physics.
Anthony's Mechanical Drawing.
3d year:
Wells' Essentials of Algebra.
Wells' New Plane and Solid Geometry.
Holton's Shop Mathematics.
Machine Design.
4th year:
Wells' New Plane and Solid Geometry.
Halstead's Metrical Geometry.
Wells' New Plane and Spherical Trigonometry.
Machine Design.
36. No.
37. Questions refer to manufacturing plants and are not applicable to our business.
38. None.

39. We have found it necessary to write practically all of our own textbooks.
40. We do not have any textbooks for work in our business. In fact we have no apprentices, as our business does not admit of them except in our Printing Dept. where the usual apprentice methods are followed.
41. The questions from 20 to 34, inclusive, cover Trade Apprenticeship Schools. This company has none.
42. We have no Trade Apprenticeship Schools, so therefore are unable to answer questions covering this branch.
43. We have no Trade Apprenticeship Schools.
44. We have a store, these questions do not apply.
45. Not used.
46. Not yet established.
47. All of our apprentices are taken from the Fitch. Coop. High School.
48. Do not have apprentices.
49. None, except in teaching Monotype keyboard operation.
50. We train girls to become expert boxmakers. We have plans for extending the teaching of trades. As we cannot give actual results as yet, we cannot answer above questions from experience. Answers not from experience would be valueless.
51. None.
52. Do not have in our plant.
53. None.

21.—*Can better results be obtained by the use of specially prepared lesson sheets?*

Ans.

1. No.
2. Yes. Our instruction papers must be adapted to local conditions.
3. Usually there can. By relating the studies to the work of the local shop, greater interest and more practical results can be secured.
4. It all depends on how much time a pupil is allowed to remain in school. If a short time, specially prepared lesson papers would be better.
5. We believe so, especially in mathematics.

6. Yes, we have found that there are very few textbooks adapted to our special use.
7. We find it so in our work.
8. Yes. Lesson sheets bring out the individuality of the instructor and establishes a more thorough correlation.
9. Yes.
10. No.
11. No.
12. We believe this to be the better way.
13. Yes, we think so, therefore have adapted information from several textbooks, etc., on one system of instruction cards.
14. Yes.
15. Yes.
16. For the present, yes. Books will soon be prepared, no doubt, to meet the demand.
17. In some cases, yes. This is especially true in teaching phonics.
18. Yes.
19. Have only tried the I. C. S. methods.
20. ——
21. We prepare lesson sheets that are especially adapted to our shop work.
22. It has produced better results in the case of The Continuation Apprentice School.
23. Yes.
24. Yes.
25. Yes, since they are adapted to our specific standards and practices and can be adapted from our specific point of view in the way of subjects, method of presentation, sequence, and quantity assigned.
26. Practical work in the sub-stations. No lesson sheets except rules and regulations.
27. Yes.
28. We believe so.
29. Yes.
30. Yes, in arithmetic and drawing.
31. Yes.
32. In addition to the books listed we use specially prepared lesson sheets.

33. We use prepared problems and discussions in shop mathematics. These are built about the work with which the student comes in contact in the shop.
34. Yes.
35. Have never used latter.
36, 37 and 38 are blank.
39. Absolutely, yes.
40, 41, 42, 43, 44, 45, 46, 47 and 48 are blank.
49. The instruction books and lessons prepared by Fanston Co. have been found very satisfactory in training operations.
50, 51, 52 and 53 are blank.

22.—What subjects should be taught?

Ans.

1. ——
2. Fundamental subjects on which the student can base further work after he has left the school.
3. Applied arithmetic. Practical algebra, particularly formulas. Geometry as applied to layout work. Shop sketching. Principles of physics and mechanics, applies. Composition.
4. Drawing, shop arithmetic, shop mathematics, shop spelling, letter writing and penmanship, safety first, mechanics, shop methods, good citizenship, hygiene, etc.
5. Mechanical drawing and shop mathematics.
6. Layouts made of all business forms called for in the lessons. Applied work, using elementary principles within the limits of the ability of the class. Extended practice in punctuation, division of words and capitalization. History of lettering.
7. We cover only such matter as is necessary in the work of the department.
8. Shop mathematics; concrete geometry, trigonometry, physics, mechanics, free-hand sketching, mechanical and architectural drafting. Cost, civics.
9. Machine shop arithmetic and mathematics, drafting, shop methods.
10 and 11 are blank.

12. We teach mathematics, shop problems and mechanical drawing, supplemented by a general lecture course.
13. See answer to question 23.
14. Mathematics, applied mechanics, mechanical drawing, elements of electricity, shop organization, machine-shop practice.
15. Shop arithmetic, special treatise on their trade, mechanical and free hand drawing, elements of mechanics, company standards.
16. Course of study appended.
17. Subjects that will make them more proficient in their work, make them better citizens, etc. Among the subjects taught are: Written and oral reading and spelling; money as a medium of exchange; the four fundamental operations of mathematics, namely, addition, subtraction, multiplication and division, etc.; civics and history, local geography, including routes of city travel, hygiene for the worker.
18. Depends on the business.
19. We favor language, arithmetic, writing, spelling and mechanical drawing.
20. ——
21. We teach arithmetic, free-hand drawing, the reading of working drawings, shop geometry, elementary shop mechanics, elementary electricity and such elementary chemistry as is particularly applicable to our work.
22. Arithmetic, algebra, geometry, trigonometry, free-hand sketching, mechanical drawing, reading, spelling, civics, economics and such subjects as an apprentice will come in contact with while learning his trade.
23. Mechanical arithmetic, commercial arithmetic, business English and branches, physics, geometry, algebra, mechanical drawing, plan reading, civics.
24. Those connected with the trades, revealing the technical matters of material design, construction and use of product made.
25. Subjects taught depend on the kind of Apprenticeship School. Our subjects are essentially trade mathematics and mechanical drawing with as much of English and elementary science as is warranted in the specific me-

chanical trade shop school. For printer apprentices emphasis should of necessity be placed on grammar and English and subjects used in that particular trade.

26. ——
27. Depends on what your boys are learning. Ours are mechanics. Algebra, geometry, plain and solid; physics, drawing, shop assignment.
28. Arithmetic and its application to shop work. Algebra sufficient for proper understanding and manipulation of formulas. Trigonometry, right triangle. English and mechanical drawing.
29. Mathematics and mechanical drawing. We have machinist and draftsman apprentices only.
30. Common subjects, dependent upon previous preparation. Technical subjects, dependent upon work for which student is preparing.
31. Drawing, mathematics, industrial history, physics, geometry, mechanics, strength of material.
32. The subjects taught are proofreading, printing, spelling, English, mathematics, history, economics and lettering.
33. Our course of study is made by the instructors of our company's Apprentice Schools and changed from time to time in our annual conference and represents what we think should be taught.
34. Algebra, shop arithmetic, English, history, physics, shop assignment, etc.

35, 36, 37 and 38 are blank.

39. See discussion in St. Louis Railway Club paper as to why I recommend reading working drawings instead of mechanical drawing, etc.

40, 41, 42, 43, 44, 45, 46, 47 and 48 are blank.

49. We teach in addition to the touch system of fingering, capitalization, proper abbreviations and general additional preparations of MSS copy.

50, 51, 52 and 53 are blank.

23.—*What should be the length of class periods?*

Ans.

1. ——
2. Not over one hour.

3. Periods of one or two hours.
4. We devote from 8 to 12 and 1 to 5 daily, except Sat. A ten-minute recess is allowed in the middle of the day or session.
5. Two hours.
6. Ours are from one-half to one hour and a half long.
7. Ours is a four-hour session with periods of relaxation.
8. As to time 75% shop, 25% shop academic. 25% of time sub-divided to meet requirements.
9. Two hours seems about right from our experience.
10, 11 are blank.
12. One hour.
13. Our equivalent of a Trade Apprenticeship School is the departmental school for new employes. Instruction cards posted on the walls or display boards are available for use—they are what might be called specially prepared lesson sheets, perhaps, and some of the theory of the work which they are to be prepared for is outlined in the instruction cards. They do practical work on school spinning frames or school looms or school twisters, and are not brought into the school room at all for school instruction.
14. From 3 to 5 hours per week.
15. Two hours.
16. From 40 to 60 minutes. Preferably somewhat flexible, at discretion of instructor.
17. 45 minutes.
18. One hour.
19. This depends upon conditions, but we had Saturday afternoons.
20. Not over 40 minutes.
21. We have from one-half hour to one hour depending on the subject.
22. This time to be governed by the subjects taught. For mathematics and drawing one to two hours, other subjects depending on the size of class.
23. Two hours.
24. Four hours per week, if the courses are properly prepared for intensive presentation.
25. Our class periods are of two hours length. Each ap-

prentice has two such periods per week for 42 weeks per year. After careful consideration of this subject and from practice of a considerable number of companies, we consider this length of period satisfactory.

26. No classes except Institute Classes (Night classes open to all employes).
27. Forty-minute period.
28. One and a half to two hours. We give three one-and-a-half hour periods per week.
29. See 20.
30. We are trying two hours and four hours.
31. Two hours.
32. From Monday to Friday our apprentices attend class in squads of five. Each squad is in class one morning period (8-12) and one afternoon period (1-5). Saturday morning the entire group attends class from 8-10. Ten hours, total period of class work.
33. One and one-half hours where very little outside preparation is done.
34. 45 minutes.
35, 36, 37, 38 are blank.
39. Thirty minutes every day. Also see discussion on St. Louis Railway Club Proceedings.
40, 41, 42, 43, 44, 45, 46, 47, 48 are blank.
49. Varies according to individuals and previous training or education.
50, 51, 52, 53 are blank.

24.—*What length of time should apprentices be required to spend in the schoolroom during their term of apprenticeship?*

Ans.

1. ——
2. We have no apprenticeship system.
3. From two to four hours per week.
4. At least two years. We will allow them four years if necessary.
5. From three to four hours a week for entire term of apprenticeship.
6. As much as is possible in keeping with economic conditions.

7. Our students attend school four hours about every two weeks, completing course in from 1½ to 3 years, according to capability and opportunity.
8. 25%.
9. In our practice they spend between five and six hundred hours for which the boys are paid regular rates.
10. 11 are blank.
12. We require an apprentice to attend school four hours per week for four years.
13. Same as 23.
14. From 3 to 5 hours per week.
15. 832 hours (2 hours, twice a week, for four years.)
16. Not less than 10% nor more than 16⅔%.
17. ——
18. 800 hours.
19. This would depend upon what advantage the boy had before entering apprenticeship.
20. ——
21. Ours spend from eight o'clock in the morning to three o'clock in the afternoon, with a half hour out for lunch, five days per week, alternate weeks, period of schooling one to two years depending on the ability of the boy.
22. Not less than four hours per week.
23. ——
24. About 200 hours per year, if the courses are carefully worked out.
25. Our apprentices attend school 4 hours per week 42 weeks of each year and during the first three years of their apprenticeship. During their last year of apprenticeship they do not attend school but may be employed in special duty work. A considerable number of companies provide 4-hour school instruction per week throughout the term of apprenticeship. From our experience we consider this portion of time satisfactory.
26. See No. 23.
27. Our co-operative school alternating weekly. Seven hours per day, five days per week, twenty-four weeks in a year for two years. Continuation School one half day each week, four hours.

28. Have not yet decided definitely, but have planned to give about six hundred hours.
29. A half day each week for a period of at least one year.
30. Four hours a week.
31. 1st year.
32. At the present time we require ten hours a week. Whether or not this will be required throughout the four years' apprenticeship has not been determined as the work has been organized only two years.
33. 10% of the time in the Apprentice Course should be spent in school.
34. Not less than two half days per week.
35. 8 hours per week.
36, 37, 38 are blank.
39. Thirty minutes a day.
40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53 are blank.

25.—*Is a bonus offered for the successful completion of apprenticeship?*

Ans.

1 and 2 are blank.
3. No.
4. No. We offer a life position, however, and no limit is placed on the number of promotions.
5. Yes.
6. Yes, we place a given amount weekly to the credit of the apprentice in the bank. This money accumulates and is paid the apprentice when he completes his time.
7. Automatic increase of wages upon passing in first study (indexing). No other automatic increases.
8. We give complete set of tools.
9. Yes, and also extra pay during their service, if their standing is "Good" or "Excellent."
10 and 11 are blank.
12. Yes—$100.
13. The teacher receives a bonus when the graduate makes good over a stated period.
14. Yes.
15. Yes, $75 upon graduation and $75 for six additional consecutive months' service.

16. No.
17. ——
18. Yes.
19. No.
20. No.
21. No, but we are not certain that it would not be a good thing.
22. Yes.
23. Yes.
24. I believe in prompt award of full pay of journeyman as a reward, with personal presentation of diploma by President of the company.
25. No. Upon the completion of their time apprentices are put at journeymen rates.
26. Must complete apprentice course successfully to get job as operator.
27. No. Pay in good wages, as boy increases in efficiency. Increase every six months. Fifteen to thirty cents per hour while an apprentice.
28. No.
29. Yes.
30. Yes.
31. Yes.
32. Yes—$100.
33. Yes.
34. No.
35. Yes, yearly bonus.
36, 37 and 38 are blank.
39. No.
40, 41, 42, 43, 44, 45, 46, 47 and 48 are blank.
49. In some cases.
50, 51, 52 and 53 are blank.

26.—*Should an apprentice be given home lessons?*

Ans.

1 and 2 are blank.
3. Yes, if he wishes to have them. He should be encouraged to make use of one or two evenings per week in study.

4. Yes, spelling, penmanship, or any lessons requiring memorizing or practice.
5. No.
6. Not if he can do his work at school; otherwise, yes.
7. We have not found it desirable.
8. Yes, but not to act as a burden. Just sufficient to indicate to parents the interest displayed by the student and to prevent too much street loafing.
9. Desirable but hard to enforce for those who need it most.

10 and 11 are blank.

12. Yes.
13. No home lessons are given.
14. Yes, where possible.
15. No.
16. Certainly.
17. Home lessons should be made optional.
18. He should, but they are not successful.
19. Would not recommend it except in special cases.
20. ——
21. They are not given any definite work to do at home, but we encourage them to do home study.
22. This subject is left to the judgment of the apprentice; the ambitious ones are anxious to do so. (Personally, yes.)
23. ——
24. Yes, lessons involving study of the work he is doing at the time. This necessitates individual treatment of apprentices.
25. Yes, by all means. We expect of our apprentices from three to four hours' home study per week. This practice has not only a good educational effect but also a highly desirable moral and social influence.
26. We do not.
27. No, but home study OK.
28. We encourage it but do not require it.
29. We encourage home study.
30. Yes, but not compulsory.
31. Yes.
32. A limited amount of home preparation for class work is desirable and necessary.

33. Very little school work should be done at home.
34. Yes.
35. We do.
36, 37 and 38 are blank.
39. Yes, but not sufficient home work to make his school work drudgery.
40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52 and 53 are blank.

27.—*What should be the period of probation for new apprentices?*

Ans.

1 and 2 are blank.
3. It is difficult to judge results from a short probation period. Apprentices should be chosen carefully and dropped at any time when the employer is convinced of their unfitness.
4. 30 days. They should be transferred to different departments until suited. We give an apprentice 3 chances. Sometimes they fail in one department and are successful in others.
5. One month.
6. We give them from a month to six months, depending upon the boy and circumstances.
7. After employment man is observed for about two weeks before being sent to school, and also during school periods.
8. Three months; longer if conditions seem to justify the extension.
9. 12 weeks is satisfactory.
10 and 11 are blank.
12. We have a six-months' period.
13. ——
14. Until he has proven himself competent.
15. Six months.
16. From four to eight weeks.
17. ——
18. From three to six months.
19. Three months.

20. ——
21. We try to weed out all the undesirable ones inside of three months.
22. Much depends on his aptitude and existing conditions. From 2 to 3 months.
23. Six months.
24. Six months, under closest observation with records of "personality" of the boy.
25. If properly observed a period from 6 to 9 months should be the proper probational period.
26. None; after entering apprenticeship, he spends several months in the course, depending upon his ability before he obtains position as operator.
27. Three to six months.
28. We have no definite time, but consider apprentices on probation for several months, and satisfactory records as producers must always be made.
29. At least three months.
30. ——
31. Six months.
32. We require one year pre-apprenticeship.
33. Two months.
34. From 3 to 6 months.
35. Three months.

36, 37 and 38 are blank.

39. Good instructor should be able to weed out incompetents in a very few months.

40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52 and 53 are blank.

28.—*What is the ultimate object of the employer in establishing such a school?*

Ans.

1. ——
2. To raise to the highest degree of efficiency that nucleus of pure English speaking men upon whom our large number of untrained foreign labor depend for their guidance.
3. To develop more efficient workmen.

4. Humanitarian—Golden Rule. To give the boys a chance and also to train men as they can do more and better work. The advantages are mutual.
5. To produce better workmen for the manufacturing world.
6. To provide ourselves with intelligent, thoroughly trained workmen, some of whom can work into executive positions.
7. To make men competent to do our work, as we cannot get experienced men.
8. To develop more efficient workmen. To provide any boy or girl an opportunity.
9. To produce better workmen and foremen.

10 and 11 are blank.

12. Our object is to develop mechanics of a higher class than we can otherwise obtain.
13. More efficient workmen.
14. It should be the development of broad-minded mechanics.
15. To train and educate mechanics for its shop.
16. To improve the present and provide for the future.
17. To make the employe happier and more efficient.
18. First, profit. Second, experienced trained help.
19. To advance the welfare of the employe, and obtain better results through special education suited to the work to be done.
20. To make the apprentice a better workman, a credit to the trade in general and the knowledge he (the employer) will get better results later on.
21. We are trying to make for our works operators and repair men.
22. To produce and turn out a better and more skilled mechanic.
23. Personal efficiency of employes.
24. To develop as many boys as possible from the ranks to be intelligent workmen with as nearly "all around" ability as possible to secure. With an adequate "promotion plan" this ought to take care of the problem of future officers of the Company.
25. The object of our schools is to develop not only efficient all-round mechanics but to develop men capable of

minor and higher responsible positions with the Company.

26. To obtain trained sub-station operators.
27. Increased efficiency.
28. Raising the standard of men in the shop so as to increase production, cut down waste, etc.
29. While we do not personally conduct a school in connection with our apprenticeship course, we consider the training given our apprentices at the Continuation Classes necessary to make proficient mechanics and better qualify them to fill higher positions.
30. Efficient workmen.
31. Higher grade workmen.
32. To develop skilled workmen.
33. To secure more efficient and better trained employes.
34. Raise the standard of employes. Training ground for future executives.
35. Efficient workmen and foremen.

36, 37 and 38 are blank.

39. Increased efficiency of employes and an organization from which foremen and officials can be made. While philanthropy is a by-product of this system, it should be considered as simply a by-product, because with right handling the proposition is selfish in so far as it has produced increased efficiency and desirable conditions away in excess of necessary costs.

40, 41, 42, 43, 44, 45, 46, 47 and 48 are blank.

49. Training workmen to our method of production.

50, 51, 52 and 53 are blank.

29.—*Is it intended that the education shall be given with a view to developing executives or more efficient workmen?*

Ans.

1. —
2. Not all of the men enrolled in the educational work are found to have executive ability. Those not having this ability are continued in the work, however, with the idea of producing more efficient workmen.
3. To develop more efficient workmen.
4. Both. We draw our executives from our shop forces.

5. Both.
6. Both.
7. Both—all the executives in the Fitting Department have risen from the ranks.
8. More efficient workmen.
9. Both; primarily workmen with every opportunity to develop into foremen.

10 and 11 are blank.

12. Yes.
13. More efficient workmen.
14. Both.
15. Workmen, but executives are also developed.
16. Both.
17. ——
18. More efficient workmen.
19. Both.
20. Both.
21. More efficient workmen.
22. Both, 50 per cent. of the graduates of the Continuation Apprentice School of the past five years are holding executive positions.
23. Efficient workmen and office men.
24. More efficient workmen. The officer question will then take care of itself.
25. Both, but more on the side of developing men for responsible positions. This is a matter which develops through the selective processes of the schools and the gravitating effect which occurs among the apprentices during the period of apprenticeship.
26. More efficient workmen.
27. Both.
28. Both, if possible. We expect to develop a corps of bright, well trained, young men to serve as skilled workmen, some to eventually become foremen and executives or salesmen.
29. See 28.
30. Primarily, more efficient workmen.
31. More efficient workmen.
32. Both.
33. More efficient workmen.

34. Both. Efficient workmen who will eventually become executives because they are the most efficient.
35. Both.
36, 37 and 38 are blank.
39. Both.
40, 41, 42, 43, 44, 45, 46, 47 and 48 are blank.
49. The latter, principally.
50, 51, 52 and 53 are blank.

30.—*In offering education to employes, does the employer expect to derive an immediate benefit?*

Ans.

1. ——
2. We do not expect the immediate benefits to be large, but our ultimate benefits are expected to justify our financial investment in this work.
3. No.
4. Yes. There is a difference after the average boy has had three months' schooling. Training must tell and quickly.
5. No, but we have found them to be no loss.
6. No, the school is not run for profit. In most cases the benefit to the firm is not immediate but deferred, and the benefits mutual. The school, however, does carry its cost by the increased production of the apprentices.
7. Ultimate benefit to employer, also employe.
8. If the training is what it should be, the results can be in the present as well as in the future.
9. No, but he often does.
10 and 11 are blank.
12. No, but he does, nevertheless.
13. More efficient employes result.
14. No.
15. No, but immediate benefit is derived.
16. Yes. If the school is well handled. The shop spirit and general morals of the works will improve.
17. ——
18. No.
19. No.
20. Not any immediate benefits, but ultimately, yes.

21. In starting the school we expected to derive benefit in three or four years. We now believe that we derived immediate benefit.
22. Not immediately, but in the course of time.
23. Not except through increased efficiency of employes.
24. Yes, and he will from the very start if his plan is what it ought to be. I have proved this in practice.
25. Yes, and also in the way of training for responsible positions, the employer expects to benefit in the future.
26. Yes.
27. No.
28. In general, no. Considerable time is required for employes to acquire sufficient education for daily application in their work.
29. Not immediate.
30. Yes, to a limited extent.
31. No.
32. Immediate benefit—in the increased interest and effort inspired by the opportunity offered.
33. Yes.
34. Not absolutely.
35. No.
36, 37 and 38 are blank.
39. This question can be answered "yes" and "no." There will be some immediate benefits. Patience is required to realize the full fruition of the plan.
40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52 and 53 are blank.

31.—*Should new apprentices be required to pass entrance examinations?*

Ans.

1 and 2 are blank.
3. No.
4. Yes. Not as a bar, but simply to find out where the employer should begin on the boy.
5. Yes.
6. No. An oral examination is all that is necessary under ordinary circumstances.
7. We do not find it necessary.

8. We require ability to manipulate common and decimal fractions.
9. Yes.
10 and 11 are blank.
12. Yes.
13. ——
14. Yes.
15. Yes.
16. Not fixed written academic tests.
17. ——
18. Yes.
19. Would recommend their doing so.
20. ——
21. We give them a simple examination in reading, writing and arithmetic.
22. Yes, but not too rigid or lengthy on account of certain conditions.
23. Not for our work.
24. Yes, but not of the ordinary usual kind. Ask them a few questions that will reveal not what they know, but how they can think.
25. Yes, both physical and mental. Our mental examination for apprentices is on the simple processes of arithmetic through fractions and decimals and on a few general questions to determine as to whether or not the apprentice is wide awake to the conditions about him.
26. Oral examination by superintendent of sub-stations.
27. Not in my judgment. Many a bright boy who may fail on entrance examination, but could make good with necessary encouragement and assistance of Continuation or Co-operative School.
28. Yes.
29. We see no objections.
30. Yes, to a limited extent.
31. Yes.
32. Yes.
33. Yes.
34. Yes.
35. Yes.
36, 37 and 38 are blank.

39. Yes.

40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52 and 53 are blank.

32.—*Are you receiving as apprentices, students of trade, vocational, industrial or pre-vocational schools?*

Ans.

1. ——
2. No.
3. No.
4. No, but we would hold that against them should they desire to apply.
5. From all such schools.
6. We take in Grammar School Graduates and High School Graduates.
7. Not to any extent, but would not object to them.
8. All grades.
9. Yes.

10 and 11 are blank.

12. No.
13. ——
14. All.
15. No.
16. ——
17. To a small extent.
18. No.
19. Yes, in a few cases.
20. Yes, we had sought apprentices in such schools.
21. No. Grade schools and High schools.
22. No.
23. No.
24. Until Pre-vocational schools are better understood, I prefer to take boys from Grade schools.
25. Only a few. Those we have received have compared favorably with those from the Public School, but the number so received has not been, since the establishment of our schools, great enough to warrant a very definite answer.
26. Probably many of our apprentices have had courses similar to the above.

27. No.
28. So far, we have formed only one class from boys employed in the shop when the course was established. We have placed in requirements for entrance that future applicants must have complied with state school laws.
29. We have no such apprentices, but have no objections to signing them.
30. Not ordinarily.
31. Yes.
32. No—we prefer boys who have had no previous technical training.
33. Yes.
34. Students with eight credits from a first-class High school.
35. Boys over 16, of good character, who can pass our examination. Sons of employes given preference.
36, 37 and 38 are blank.
39. When we can get them, but there is no very great supply of such applicants.
40, 41, 42, 43, 44, 45, 46, 47 and 48 are blank.
49. No.
50 and 51 are blank.
52. Yes, students of Trade School receive credit for their work.
53. ——

33.—*What may be said as to the comparative efficiency of these students with those coming from the ordinary public schools?*

Ans.

1 and 2 are blank.
3. No experience.
4. Pupils leave school about the age they begin to learn. About 72 per cent. of all pupils are said to leave the St. Louis schools before they complete the 6th Grade. This is true of towns around St. Louis.
5. We find them to make more efficient apprentices.
6. We have no means of judging.
7. Should be better—have not had enough to judge.
8. Much depends on the elementary instruction; if thor-

ough, they are desirable; if indifferent methods have been the order, students usually must be remoulded.

9. Their previous training, while sometimes helpful, is often of no value to us, sometimes a detriment.

10 and 11 are blank.

12. Have no knowledge on this point.

13. ——

14. Better.

15 and 16 are blank.

17. Our experience with trade and vocational schools has been unsatisfactory. We have found them not properly trained for our needs, and we have had to correct the wrong methods before we would teach them the right ones. The girl who has come direct from the public schools has been more satisfactory.

18. ——

19. Have not had many apprentices except from the public schools, and not enough to judge by.

20. Having had experience in the line of work assigned to them, they are superior.

21. We have had no experience.

22 and 23 are blank.

24. Believe that trade schools are wrong in principle, that pre-vocational school men do not yet understand trade training, but they will soon begin to learn how to advise boys in selecting trades. Then they will be important factors, but not until then.

25. Those we have received have compared favorably. (See answer to Question 32.)

26. Apprentices must have some electrical education to supplement their public school training.

27 and 28 are blank.

29. See 32.

30. ——

31. More efficient.

32. We have not made any tests to determine the comparative efficiency. We require each apprentice to follow out the entire course prescribed for our work. Boys who have had some technical training usually object to

going over the work a second time. This is one reason for our preference for the non-technical school boy.

33. More efficient.
34. Students coming from High school are better.
35, 36, 37, and 38 are blank.
39. Generally speaking, better than the ordinary public school graduate.
40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50 and 51 are blank.
52. Much better prepared. We encourage and support the State Trade School located in this city. It fills much of the place of a Corporation School.
53. ——

34.—*Is the instruction offered by the various trade schools practical from the manufacturers' point of view?*

Ans.

1 and 2 are blank.
3. No experience.
4. Not unless the trade school follows specific lines and does actual work. By actual work, I mean that is salable or of market value.
5. Yes.
6. We have no means of judging.
7. Yes, if trained to any extent for the particular manufacturers' line.
8. Yes.
9. No, there being, however, a few exceptions.
10 and 11 are blank.
12. At present only to a limited extent, but we believe that the trade school courses are being rapidly improved.
13. ——
14. Yes, from some of them.
15. Do not receive such students.
16. Shop training is co-operative. Boys are selected by the factories and sent for instructions to the public school. Continuation Course. Foremen from our shops have monthly meetings with the instructors at the school for council and guidance.
17. Not practical in our experience.

18. No.
19. Have not had enough experience with boys from trade schools to say.
20. Yes, but its scope is limited.
21. We have had no experience.
22. Yes.
23. Yes.
24. Emphatically no, as applied to mechanical trades which may be taught in the commercial trade itself only.
25. In general trade processes, yes. In some cases, however, there is sufficient attention to economy in the use of time and material, and in trade schools a stimulus of the commercial atmosphere of the manufacturing shop is lacking. In general the product of the trade school should compare favorably with that from the ordinary public schools.
26. ——
27. As far as it goes, does some good.
28. City Trade School training is practical from the point of view of the manufacturer requiring services of men trained as machinists, carpenters, cabinet makers and pattern makers.
29. The training given our apprentices at the Technical High School is practical. We have had no experience with other schools.
30. We have not had occasion to test this.
31. In our particular case they have co-operated with the industries and arranged a practical course.
32. Statistics show that there is a great demand from employers for the graduates of the Philadelphia Trades School.
33. Yes.
34. We have had no trade schools in this city and, therefore, have had no experience with such students.
35, 36, 37 and 38 are blank.
39. Very seldom. There are notable exceptions.
40. We have not had much opportunity to study this from the standpoint of our own business. The writer, however, has had occasion to examine into this question at

various times and believes that the best trade schools do give practical instruction as far as they go.

41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52 and 53 are blank.

STEEL AND IRON MANUFACTURER

20. *Q.—What textbooks are in general use?*

Ans.

Plant No. I—No textbooks are used.

Plant No. II—None.

Plant No. III—Wentworth's Geometry; University of Wisconsin Extension Division; Pamphlets, Formulas, Geometry, Algebra, Trigonometry.

Plant No. IV—White's Complete Arithmetic; Swoope's Practical Lessons in Electricity. (No textbooks used in drawing.)

21. *Q.—Can better results be obtained by the use of specially prepared lesson sheets?*

Ans.

Plant No. I—Yes.

Plant No. II—Yes.

Plant No. III—We find better results in our drawing class by the use of specially prepared problems.

Plant No. IV—We think so.

22. *Q.—What subjects should be taught?*

Ans.

Plant No. I—We teach mechanical drawing, mathematics, and physics applied to practical shop problems, and other subjects pertaining to the various trades.

Plant No. II—Mathematics, arithmetic, algebra, plain geometry, simple trigonometry, mechanical drawing, elementary mechanics, elementary physics, elementary strength of materials. A brief elementary course of instruction concerning the industrial operations carried on by the company.

Plant No. III—To the average student at this plant the above studies are sufficient. This, however, includes only apprentices in machine, boiler and electric shops.

Plant No. IV—Arithmetic, mechanical drawing, electricity.

23. *Q.—What should be the length of class periods?*

Ans.

Plant No. I—The length of our class periods is 1¾ hours.
Plant No. II—Two hours.
Plant No. III—Two hours in mathematics and elementary drawing. Advance drawing classes could be lengthened to four hours successfully.
Plant No. IV—Two hours.

24. *Q.—What length of time should apprentices be required to spend in the school room during their term of apprenticeship?*

Ans.

Plant No. I—The total time required at our works is 728 hours.
Plant No. II—Four hours per week, fifty-two weeks per year, for four years.
Plant No. III—Four hundred hours is a good average.
Plant No. IV—Two hours.

25. *Q.—Is a bonus offered for the successful completion of apprenticeship?*

Ans.

Plant No. I—Yes.
Plant No. II—Yes.
Plant No. III—No. Rate per day variable, depending on ability of apprentices.
Plant No. IV—Not at the present time; possibly in the future.

26. *Q.—Should an apprentice be given home lessons?*

Ans.

Plant No. I—No, but he should be encouraged to study matters pertaining to his trade during his spare time, and cultivate reading of trade journals.
Plant No. II—Yes.
Plant No. III—Were the interest sufficient, yes.
Plant No. IV—We think so.

27. *Q.—What should be the period of probation for new apprentices?*

Ans.

Plant No. I—One year.
Plant No. II—Three months.
Plant No. III—Six months.
Plant No. IV—We have none.

28. *Q.—What is the ultimate object of the employer in establishing such a school?*

Ans.

Plant No. I—Efficient workmen.
Plant No. II—To produce more efficient workmen and better citizens.
Plant No. III—More efficient workmen, who no doubt will develop into foremen, possibly executives.
Plant No. IV—Our object is to make more efficient workmen and possibly to create a larger field from which to pick heads of departments, and possibly executives, or if our apprentices show proper qualifications they will be selected for the students' course.

29. *Q.—Is it intended that the education shall be given with a view to developing executives or more efficient workmen?*

Ans.

Plant No. I—The primary object is to develop efficient workmen.
Plant No. II—Both.
Plant No. III—More efficient workmen, who no doubt will develop into foremen, possibly executives.
Plant No. IV—Both.

30. *Q.—In offering education to employes, does the employer expect to derive an immediate benefit?*

Ans.

Plant No. I—Yes, to a certain extent.
Plant No. II—No.

Plant No. III—He expects an employe to be more interested in his line of work: therefore, will derive some immediate benefits.

Plant No. IV—Very little.

31. *Q.—Should new apprentices be required to pass entrance examinations?*

Ans.

Plant No. I—Yes.

Plant No. II—Yes.

Plant No. III—Yes, although we find at the present time a personal talk with the applicant will indicate whether or not to enter him for the probationary period. .

Plant No. IV—Not at present time.

32. *Q.—Are you receiving as apprentices, students of trade, vocational, industrial or pre-vocational schools?*

Ans.

Plant No. I—Up to the present time we have had no apprentices from such schools.

Plant No. II—No.

Plant No. III—We are receiving apprentices mostly from the public schools, where vocational training is given to a limited extent, woodworking and the use of tools being the main feature.

Plant No. IV—No.

33. *Q.—What may be said as to the comparative efficiency of these students with those coming from the ordinary public schools?*

Ans.

Plant No. II—Do not know.

Plant No. III—While individual cases vary to a great extent, the boys with a knowledge of tools are better workmen. This is especially noticeable in the drawing class as well as the shop.

Plant No. IV—Answered by 32.

34. *Q.—Is the instruction offered by the various trade schools practical from the manufacturers' point of view?*

Ans.

Plant No. II—Have had no experience with trade schools.

Plant No. III—Lacks a diversity of manufacturing common to many other cities, and on this account conditions do not favor the co-operation of the public schools with the industries toward vocation training to such an extent as other towns where a variety of industries exist. However, the public school officials are increasing yearly their course of commercial training, manual training and domestic science.

Carnegie Technical Schools, Pittsburgh, Pa., is the nearest Trade School.

Plant No. IV—We consider instruction offered by trade schools the making of a good foundation by which the management can quickly induct the student into the requirements of his work and the plant.

Summary:

The answers received from the questionaire sent out by this committee have been summarized to briefly show a fair statement of the existing conditions in Corporation Schools. The reasons, however, for arriving at these conclusions may be minutely determined by referring to the answers in full as contained in the foregoing questionaire.

Question 20.—What textbooks are in general use?

Answers: Their own, 6; standard publications, 16; do not believe in textbooks, 2; both their own and standard publications, 6; I C S books, 3; none, 20.

Question 21.—Can better results be obtained by the use of specially prepared lesson sheets?

Answers: Yes, 30; none, 18; no, 3; undecided, 2.

Question 22.—What subjects should be taught?

Answers: Arithmetic, drawing, algebra, geometry, physics, spelling, writing, penmanship, safety first, mechanics, civics, hygiene, history, geography, English, elementary electricity, elementary chemistry, trigonometry, economics, proof reading.

Question 23.—What should be the length of class periods?

Answers: One hour, 7; four hours, 3; two hours, 8; three quarters of an hour, 2; forty minutes, 2; from 1 to 2 hours, 2; one hour and one-half to two hours, 2; one hour and one-half, 1;

one-half hour, 1; one-half to one and one-half hours, 1; one-half to one hour, 1; one hour and forty minutes, 1; variable, 3.

Question 24.—What length of time should apprentices be required to spend in the school during their term of apprenticeship?

Answers: One year, 7; two years, 5; four years, 4; three years, 3; six months, 1; variable, 2.

Question 25.—Is a bonus offered for the successful completion of apprenticeships?

Answers: Yes, 18; no, 15.

Question 26.—Should an apprentice be given home lessons?

Answers: Yes, 23; no, 7.

Question 27.—What should the period of probation be for new apprentices?

Answers: Three months, 7; six months, 6; one month, 2; two months, 1; twelve months, 1; two weeks, 1; one to two months, 1; two to three months, 1; one to six months, 1; three to six months, 3; six to nine months, 1.

Question 28.—What is the ultimate object of the employer in establishing such a school?

Answers: Develop better workmen, 15; increased efficiency, 4; training in their own methods, 4; develop executives, 3; raise standards of workman, 2; humanitarian, 1; provide for future, 1; happier and more contented workmen, 1; profit, 1; welfare, 1.

Question 29.—Is it intended that education shall be given with a view to developing executives or more efficient workmen?

Answers: Both, 19; workmen, 4.

Question 30.—In offering education to employes does the employer expect to derive an immediate benefit?

Answers: No, 23; yes, 9.

Question 31.—Should new apprentices be required to pass entrance examinations?

Answers: Yes, 23; no, 6.

Question 32.—Are you receiving as apprentices students of trade, vocational, industrial, or pre-vocational Schools?

Answers: No, 19; yes, 13.

Question 33.—What may be said as to the comparative efficiency of these students with those coming from the ordinary public schools?

Answers: More efficient, 10; of no value, 4; less efficient, 2.

Question 34.—Is the instruction offered by the various trade and industrial schools practical from the manufacturer's point of view?

Answers: Yes, 14; to a limited extent, 5; no, 5.

The following maps show the geographical location of schools, of both manufacturing and transportation corporations throughout the United States. In the preparation of these maps it was thought best to prepare separate charts for the manufacturing and transportation corporations. These maps show not only the extent to which the work is being developed, but are designed especially to be of assistance to our members in arranging itineraries for investigating and visiting such schools. An attempt has been made to make the charts as complete as possible and the committee will appreciate any additional data along this line which will be of assistance. It is particularly characteristic as may be seen, by reviewing the chart that the schools of manufacturing corporations are concentrated in the Eastern part of the United States, while those of transportation companies are more distributed throughout the United States and are represented in the Western part principally by such systems as the Sante Fe and the Southern Pacific.

Conclusions: In reviewing the work of this committee for the past year the fourth recommendation of last year's committee, regarding the investigation of the public school system in its connection with corporation schools, falls under the activities of another committee. This subject was therefore not investigated by this committee.

It is interesting to note from the statistics obtained that while these schools were established independently the answers to the questionaire show that in the main they are being operated along similar lines and with the same results in view.

Recommendations: This committee recommends to the ensuing committee on Trade Apprenticeship Schools that it direct its activities during the coming year along the following lines:

1—That statistical data be obtained like that tabulated by the present committee. It is believed that this is the best method of presenting the standards and practices of corporations in this work.

2—That further and as complete information as possible be obtained on lines of work, standards of practice and efficiency of methods in connection with such pioneer and experimental work as has been done as well as on present methods.

3—That the maps which have been prepared by the present committee be extended and made as complete as possible in accordance with the development of the corporation schools.

4—That in its work the committee constantly bear in mind the desirability of making deductions and providing information that will assist, not only in the establishing of new schools but for the efficient guidance of those already established.

Respectfully submitted,

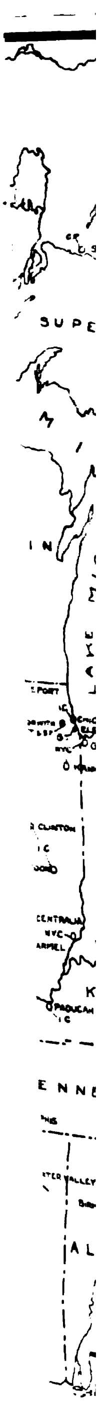
J. M. LARKIN, Chairman,
Fore River Shipbuilding Corporation, Quincy, Mass.
F. W. THOMAS, Supervisor of Apprentices,
The Atchison, Topeka & Santa Fe Railway Company, Topeka, Kansas.
W. L. CHANDLER, Dodge Manufacturing Co.,
Mishawaka, Indiana.
J. W. L. HALE, Supervisor Apprentice Schools,
The Pennsylvania Railroad Company, Altoona, Pa.

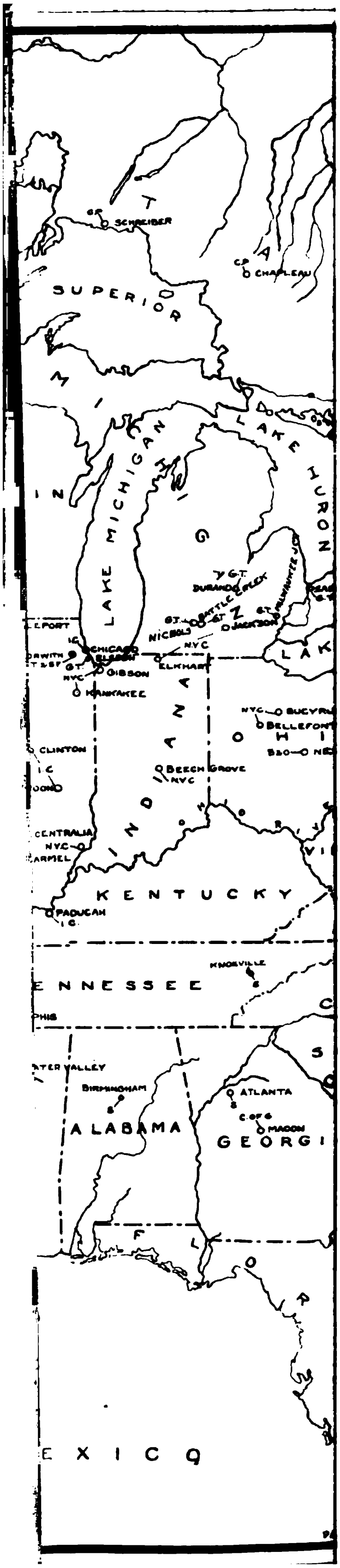
THE CHAIRMAN: Since Mr. F. W. Thomas of the Atchison, Topeka & Santa Fe Railway Company and Mr. W. L. Chandler of the Dodge Manufacturing Company are not present I will call upon Mr. J. W. L. Hale of The Pennsylvania Railroad Company.

MR. HALE: Mr. Chairman and gentlemen. First allow me to say that it is an unusually great pleasure, also an inspiration, to be here at this time. The cordial spirit, the possibility for exchange of experiences and the general business-like atmosphere of our conventions from the first are very gratifying and much appreciated.

Recently in one of our classes we worked out, according to the subject academically called Algebra, a problem on finding the number of men required for a particular job. The answer came out two and one-half men. We therefore at once had a physiological problem of supplying the men. The situation was soon relieved by someone's humorously suggesting that we might put on that job two men and one apprentice.

The methods of our conventions heretofore and this one go a long way towards developing the whole man so that our methods

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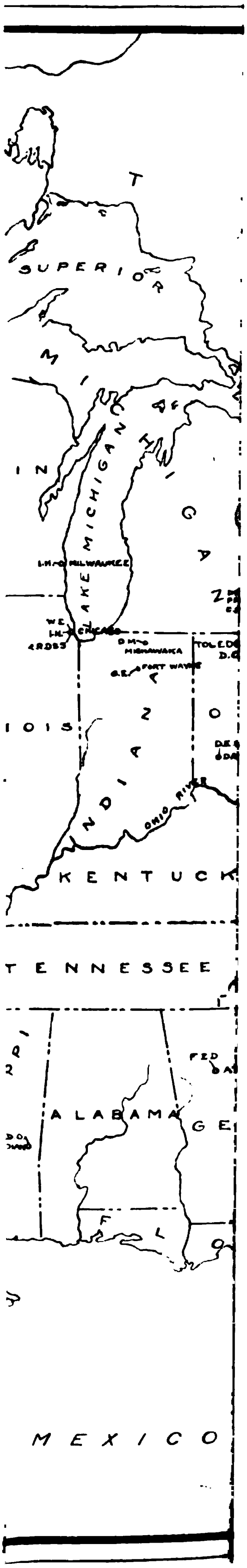
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applied to apprentices should develop a whole man and not a half man. That is what we are hoping to do and we feel that we are accomplishing that in some degree.

Much remains to be done along the lines of development for efficient methods of apprentice training. We have made a good step. We are mounted and have made a long length in the road since our little organizing convention in New York several years ago.

The Committee on Trades Apprenticeship Schools unlike some of the other committees has had interesting statistics on which to work. That is, there are already established a large number of Trades Apprenticeship Schools from which very interesting comparative data can be obtained. The growth of the schools of manufacturing industries has been very rapid during the past few years, and rapid strides have been made in the development of the railroad apprenticeship schools. This type of school was carried across the continent in two steps by the New York Central and the Santa Fe Lines and has since been materially strengthened by the development on the Southern Pacific system. In this connection I would respectfully direct your attention to the maps prepared by this committee which show the geographical location of railroad apprentice schools and the schools of manufacturing companies. These will assist the members in visiting such schools and in obtaining much first hand information on the methods employed in instruction.

Regarding the specific questions before us, the matter of text books seems to be answered largely in the words "our own make." This includes also the idea of "Made in America."

The replies which the committee received emphasize the need of specific instruction material. There are on the market already texts which corporations have found valuable in connection with the apprentice instruction, but we use the text thus far only as reference material. There is a good field for development along this line.

What subjects should be taught? The subjects taught are essentially: Shop mathematics and such branches of other elementary mathematics and subjects as are required in the particular industry in question. This is a rather difficult question to answer because our representation includes schools of so many different types. The printers have a matter to thrash out by themselves. Those engaged in training machinists have another and should thrash their difficulties out by themselves.

In addition we have the fact that all corporations in this work have certain general principles that are the same.

"What should be the length of class periods?" Quite a diversity of opinion exists on this subject. We have found that the two-hour period is not too long. The length of period, or the apparent length of period depends upon how successful the instructor is who conducts the class. In drawing work the two-hour period is not any too long. The time for problem work, as I see it, depends on how successful the instructor who is directing the class may be. We use a period of two hours, giving our apprentices a total of four hours' instruction a week and this works satisfactorily with us. In my investigations I have found this to be the practice of a large number of manufacturers. Evidently the period should not be so short that it is time to close up when the boys begin to get interested.

No. 24. "What length of time should apprentices be required to spend in the school room during their term of apprenticeship?" Here again the practice is quite varied as the statistics show. Our apprentices receive a total time in the school room of 504 hours and they receive school instruction during the first three years of apprenticeship. The fourth year they are kept out to do special duty work as required.

25. "Is a bonus offered for the successful completion of apprenticeship?" A large number of companies offer a bonus but our officials have thrashed that matter over very thoroughly, and they do not give a bonus at the present time. However, I see now before me several gentlemen who have had extended experience in apprenticeship work, and I think we can hear from them later on in regard to this subject.

26. "Should an apprentice be given home lessons?" I would say by all means, "Yes, not only from the standpoint of the direct educational value, but also from the standpoint of the social and moral value of that home instruction." Our boys are expected to give from three to four hours a week to home study, and we try to enforce that. These home lessons are done on their own time. I am glad to say they do carry this work out to a reasonable degree and to a satisfaction both to themselves and to their employers.

27. "What should be the period of probation for new apprentices?" It seems to me that with a good instructor undesirable apprentices should be eliminated within six months, possibly a shorter period, but even in that length of time some of them will surprise you. Sometimes boys will wake up at the end of the first year. They do not generally get a chance to wake up with us after that time. It seems to me that six months is a reasonable time for competent instructors, keeping in close touch with the work, to determine whether the boys will make desirable apprentices or mechanics.

28. "What is the ultimate object of the employer in establishing such a school?'

The object of these schools is to obtain competent mechanics who are capable of doing the work satisfactorily. This is a very important problem to-day for the railway manager. Our schools are conducted also for the education and development of those capable of responsibility in the shop management, because a great deal of our work is specialized and we must have a considerable number of men competent to direct in the shop.

The employer expects also to derive immediate benefit in the way of more efficient mechanics and also in raising the level of the whole shop. Apprentices should be required to pass entrance examinations, both physical and mental, thus going through a selective process which is very desirable.

Let me close with this statement. One corporation in this country spends one million dollars a year in making tests of material which they buy which ranges all the way from steel rails to soft soap. They find that it pays to spend this one million dollars just for testing the material. There should be a testing department for the apprentice who is to use the material just as much as there should be for the materials which the apprentice or the journeyman use. The testing department exists for the purpose of securing the highest degree of safety of passengers and employes, and the apprentice testing department exists for the purpose of developing to the highest possible degree the efficiency and intelligence of the apprentices in the employ of the company. Both are paying propositions. I thank you. (Applause).

THE CHAIRMAN: Mr. A. L. Rohrer of the General Electric Company.

Mr. Rohrer: Gentlemen. The plan of shop apprenticeship schools, which we like to discuss, is very interesting to us who are directing it. The replies to the questionaire which the committee sent out are interesting, especially the question, "What is the ultimate object in establishing schools or class-room work in connection with shop apprenticeship systems?" I think we all agree that the real purpose of the entire shop apprenticeship system is more or less a selfish one; namely, to produce for our corporations skilled and intelligent shop mechanics, or, as No. 6 expressed it in the questionaire, "To provide ourselves with intelligent, thoroughly trained workmen, some of whom can work into executive positions."

Some of these so-called "efficiency experts" claim that "scientific management replaces individual intelligence." If this be true it will render all our apprentice training unnecessary. These experts, in my opinion, will have much difficulty in furnishing us satisfactory proof of their claim. There may be some shops where the work done is of so simple a character that a small amount of such training will give a large increase in production. But in shops where all kinds of machine-tool operations are carried on, we still need the trained and intelligent mechanic.

All of us here have realized for some time that there are not as many skilled machinists as there should be, so that our first and original purpose in being interested in apprenticeship systems is to produce real live, active mechanics. Now, in doing that we shall find, among all the boys who come and go and develop into men and machinists, a few who are capable of filling leading positions. We have every reason to expect such results, although we are not always successful. For instance, at Schenectady we have found, among the 700 or more apprentices who have completed their time, young men who possessed executive ability, and we have found good positions for them. This has worked out so satisfactorily that for some time whenever a leading man is needed for new work or the filling of a vacancy, we have adopted the policy of having the list of graduate apprentices scanned first. We have usually found there the sort of men we were seeking.

In our class-room work at Schenectady everything necessarily centers about one subject—mechanical drawing. We insist upon our boys understanding very definitely that the blueprint is the universal language of the machine shop, no matter in what part of the world that shop is located, and that the ability to read this universal language is of the greatest importance to them. Mechanical drawing must come first, last and all the time, and we have worked it out, I think, somewhat differently from most of you. Our instruction in mechanical drawing is entirely from the blackboard. The drawings which the boys are required to make are a part of their home work. I was very glad indeed to have Mr. Hale's testimony in regard to this home work. It teaches the boy the habit of study and work at home, and he will not have the impression that in order to study he must have four class-room walls about him, with blackboard and all the accessories; but he will find that he can do this work of drawing and sketching at home, even though the conditions are not ideal. If you succeed in fixing this habit in the boy's mind, it will survive considerably beyond the apprenticeship period and will have a great deal to do with his success in the future.

We have always emphasized the habit of saving, as well as the habit of studying. When the boy is about to complete his four years and is to receive the bonus of one hundred dollars, we ask what use he proposes to make of this bonus, and we suggest to him that he start a savings-bank account. As a result, a large majority of our boys started their first savings account, and this has been particularly useful during the past six or eight months of slack work.

In addition to calling their attention to the fact that they must be good mechanics or good draftsmen or good patternmakers, we also impress them with the fact that they must be good citizens. We give the boys talks along these lines and remind them that they have certain duties to perform. Workmen hear so much these days about their rights that they are apt to forget the duties which they owe to their families, municipalities and states.

Our class-room work is carried through 48 weeks during the year. The remaining four weeks allow the apprentices to select their vacation week. Some take advantage of it and some do not. We find it necessary to arrange these so that the boys' vacations will fit into their families' vacation arrangements.

Someone has very aptly said that in the industrial field we deal with five M's—Money, Machinery, Materials, Markets and Men. We can control the first three of these and sometimes the fourth. Money comes as a part of the financing, and specifications can always be written for our machinery and materials. Unfortunately, we have learned during the past year that we do not have much control over the fourth item, Markets, but we leave that matter to the commercial men to work out. The fifth, and last, Men, is the "M" that concerns us in these sessions. (Applause).

THE CHAIRMAN: Mr. Thomas is now present and we would like to hear from him in the discussion of this paper.

MR. F. W. THOMAS: (The Atchison, Topeka & Santa Fe Railway Company): There are three absolutely necessary essentials in the establishment and successful operation of an apprentice system on a railway. The first of these is the approval, moral as well as official, and the support of the big boss. On our railroad we speak of our President as the big boss. So when it becomes known that the President is backing a project all subordinate officers will lend a hand and give it a generous push. With our company we had from the beginning Mr. Ripley's backing, and with this it is only necessary for us to supply the details.

The second essential is the boy. Out in our country it is a great deal more difficult to get desirable material for mechanical trades than it is with you. You have plenty of boys here; this being a strictly manufacturing section, your towns are filled with boys of all ages, colors, and nationalities, and you have unlimited resources to draw upon. You have your private and provisional schools, your trade schools, your training schools, your vocational, and pre-vocational schools, and hundreds of other different kinds of schools, whose aim is or should be to develop boys for your service. But out in our country, out in Kansas, which is strictly an agricultural state, where we have none of the above mentioned schools, we have to select a great many of our boys from the farm, and it is pretty hard to get a boy to leave a good Kansas farm to go into a railroad shop.

The third essential is instructors. In the beginning of our present apprenticeship system this was a serious proposition with us. But it is no longer so, as we can from our ranks of graduate journeyman apprentices select enough desirable instructors to fill our needs. We have found our own graduates make our best instructors. While in Chicago the other day enroute to Worcester my boss in referring to one of our instructors said, "I want that man for general car inspector. Can I have him?" I said, "Yes, sir, certainly you may have him." He then asked, "have you a man to take his place?" I said, "Yes, sir, plenty of them." We keep such a close tab on the apprentice boys who enter our service that we are enabled to spot certain boys whom we think have certain qualifications for certain positions, and if after or during his apprenticeship we think him possessed of the necessary qualifications for an apprentice instructor, we place our brand on him, and claim him as our own. Later on we will place him with one of our older instructors at one of our larger apprentice schools, and give him some specific training for the position, and when we have a vacancy we send him out to fill it.

One of the most important things in any apprentice system is the selection of the lesson or instruction sheets. The more I see of the apprentice systems over the country the less I think of the adaptability of the instruction sheet. Eight years ago when we established our present apprentice system we searched the shelves of book stores, consulted the publishing houses, but found nothing which we thought would fill the bill, and we immediately had to prepare our own instruction sheets. It took from four to five years to get our lesson sheets down to their present efficient form. They are still not exactly what we want them to be but are getting more and more like it each year.

You are mistaken in the idea of thinking we can use the same methods of instructing every boy. One of the lame features of our public educational system is that all kinds of boys and girls, the brightest and smartest and dullest, are all massed together in one class. The brighter pupils are held back, and often become indolent on account of the lack of something to do while the duller pupils are shoved over the work faster than they can possibly assimilate it. One strong point I think of our apprentice system has been the individuality of our instruction. You cannot have your boys made to order. The lesson sheets and system of instruction must be adapted not only to suit the boy but to suit the trade he is indentured to learn. The President of our Railway Company paid our system a compliment a year or so ago in remarking that while he, the Vice-Presidents, General Managers, and Superintendents, were doing their utmost for the present needs of the company and endeavoring to make a dividend for the stockholders, the head of the apprentice department had still a greater problem in that he was building men for our future use. To those of us who look at the question in the same light as our President, there must be some glory and some pride in doing this work. While the work itself may be of a kindergarten nature, if we are engaged in the work of training young boys and young men for our future needs those who will occupy our places in the next few years, there will be glory and honor in doing it.

In the establishment and conducting of our apprentice system we have never asked for an appropriation for the maintenance of it, but have made each shop bear the cost of conducting the apprentice schools in the same manner that they bear the cost of the tool room, power house, cranes, shop tools, etc. If you ask for a monthly appropriation to carry on this educational work, when hard times come on; if it is necessary to retrench, the management will see this big lump sum of $1,000 or $2,000 or $5,000 a month, and the heads will say: "Business is dull and we are not working many men so let us cut this off until business is better." As it is absolutely necessary to have men to man a shop it is perfectly proper that the making and training of these men should be considered a legitimate shop expense, and in such a light we consider it. Our apprentice system is not a separate branch of our shop organization but is a part of the organization and nowhere in our accounting department does a direct charge to the apprentice system appear. In the establishment of an apprentice system I would like to warn you to see to it that the apprentice system is considered a part of the shop organization as it is as necessary for its proper and economical operation as the power house, the tool room, or the cranes.

We will always have problems in our manufacturing plants and in our railroad shops, problems involving the best method of turning out work, machines for doing such work, and the best material from which a certain article should be made, but the greatest problem of any shop organization or any manufacturing plant will be its human help, its men. And it is important that this greatest problem should receive earnest consideration at your hands.

I said a while ago that out in our section we do not have the advantages of having trade schools and vocational sections from which to select our boys, and it is often difficult in finding the right kind of material for our apprentices. However, in spite of this we have a large waiting list at practically all points on the system, and at Topeka our main shop, we have an eighteen months' supply on hand. A boy making application for employment as an apprentice in the Topeka shops to-day will possibly be employed January 1st, 1917. We have a rule on our system that applicants must be accepted in rotation, first come first served. Our management does not allow us to discriminate and pick out the best boys from the waiting list, but must take the boys as they have filed their application. Our chief mechanical officer was a poor boy himself, without friends or influence. He entered upon his apprenticeship in the regular manner and has climbed up from the ranks until now he occupies the highest mechanical position on our railroad system, and he tells me he wants all boys making application to have an equal chance. On this list, however, we find a number of boys we know are not qualified to enter on an apprenticeship. The boy may be deficient in education, or may be deficient in brains, he may not have any mechanical talent, and as our instructors must handle this boy for four years and be solely responsible for his development into a first-class mechanic, at the end of his four-year apprenticeship, it is incumbent upon him to closely examine the applicant to ascertain whether or not he is fitted to enter upon an apprenticeship. True, all the boys coming to us are not equal either in education or mental make up. We judge a boy principally by the opportunities he has had. If I happen to be in the office when the boy is making application I talk with him and question him closely. I endeavor to get the boy's confidence. I ask him about his playmates, about his people, his relatives, friends, brothers, sweetheart, and in that way I find out much about the boy that it would be impossible to ascertain through any written application. Of the boy of unlimited opportunities we demand much upon his entrance examination. But upon the boy of meager opportunities, who, upon reaching the age of 15 or 16, has had to leave school to help support his mother, or several brothers and sisters, we are pretty lenient, feeling that that sort of a boy is the kind we want and that the company will make no mistake in teaching him his trade. (Applause.)

I feel, gentlemen, that a great many of our apprentice systems are going too far with the school instruction and paying too little attention to the actual shop instruction of the apprentice. Some of us have endeavored to teach too many subjects in the school room, not confining ourselves to the subjects the boy actually needs in his trade. We believe that the school instruction and shop instruction are indispensable and closely bound up in one another, that the one without the other will prove a failure. If both are given due consideration and a balanced ration is given the boy, so far as his instruction goes, we cannot help making a success of the venture.

Our company has made it a law that all official positions must be filled from those already in its employ and we cannot go outside and employ a man for a salaried position so long as there are employes in our ranks who have been especially trained for our needs.

There is nothing that destroys the *esprit de corps* of a body so quickly and so fatally as the filling of all desirable positions in your shop or in your plant with men brought from the outside, leaving nothing but the crust of the bread for the young men you have taken into your service. Our apprentice system during eight years of its existence has proven the wisdom of the founder and is stronger to-day in the hearts of our officers and those responsible for the management of the road than at any period since its organization. (Applause.)

THE CHAIRMAN: We will now have the pleasure of hearing from Mr. A. F. Bardwell of the Yale and Towne Manufacturing Company.

MR. A. F. BARDWELL: Gentlemen, a little disappointment was encountered in this report as it merely gives answers to the questionaire and does not even give the committee's opinion or a summary of same.

About the only way that the matter can be fairly discussed is to take each question and partially summarize and discuss at the same time.

It is also recognized that the committee had considerable work ahead of them and in all probabilities desired not to express an opinion in order to bring out a more complete discussion.

Question 20, page 4: "What text books are in general use?"

From the questionaire it would appear that about all available books are used, but few are used only for reference.

Question 21, page 9; "Can better results be obtained by the use of specially prepared lesson sheets?"

The majority of the answers would indicate that there could, also, that they are using their own text books. As for our Company, we have found that these must be continually changed (or as the ladies would say, provided with a new dress) in order to keep up the enthusiasm. The mistakes of the apprentices should be put into the lessons, keep a lookout in every day life for new examples, but particularly in the lines of your business.

Question 22, page 11; "What subjects should be taught?"

The answers to the questionaire would indicate that practically all agree that mechanical drawing and shop arithmetic are very essential, but we believe that the subjects taught should be varied somewhat with the lines of business.

Question 23, page 13; "What should be the length of class periods?"

The questionaire brings about an adversity of opinions ranging from 40 minutes to five hours, but our experience has been that shorter periods and more of them are more desirable and we are at the present time giving one hour periods which works very satisfactory. Students to be most efficient must be enthusiastic and this enthusiasm cannot be maintained with long periods.

Question 24, page 15; "What length of time should apprentices be required to spend in the schoolroom during their term of apprenticeship?"

Again we have an adversity of opinions, and no doubt this was brought about by the nature of the various businesses and the generosity of the companies. Our company gives about 800 hours, but we feel that it should not be less and if anything more, as the students do not assimilate in this time all that is desired.

Question 25, page 17; "Is a bonus offered for the successful completion of apprenticeship?"

The answers to this question would indicate that the majority give a bonus. We find it a good stimulus and in reality it is practically a deduction from their wages (in lieu of a bond) and given them if they successfully complete the apprenticeship. Many get their start with this bonus when, if they had received same in wages all would have been gone.

Question 26, page 18; "Should an apprentice be given home lessons?"

The answers would indicate that it is most desirable, but they also indicate that experience has found it impractical. We encourage same but do not make it compulsatory.

Question 27, page 20; "What should be the period of probation for new apprentices?"

The answers show from one to six months. While some boys will show their aptitude in three weeks, others are on the fence at three months. We have a three-months clause in our indenture but we very often carry a boy from four and even six months before deciding finally. We have also found that some of the slower ones at the start make the best journeymen.

Question 28, page 21; "What is the ultimate object of the employer in establishing such a school?"

The answers to this question show much modesty and while every corporation owes a certain amount to the community in which they do business, the stockholders expect their dividends: consequently, their ultimate object is to make money and this is the reason for establishing corporation schools.

Question 29, page 23; "Is it intended that the education shall be given with a view to developing executive or more efficient workmen?"

While the majority say both, it must be recognized that the percentage of executives are extremely small, consequently, most of the education should be for more efficient workmen. Our experience agrees with No. 24's answer, namely, more efficient workmen. The officer question will then take care of itself, and then comes the saying that you can never keep a good man down.

Question 30, page 25; "In offering education to employes, does the employer expect to derive an immediate benefit?"

The answers do not indicate that they expect an immediate benefit, but they do indicate that all expect sooner or later to derive benefits, and from past experience we believe they will.

Question 31, page 26; "Should new apprentices be required to pass entrance examinations?"

The answers would indicate that the majority have some form of entrance examinations. Some of them are of a brief or oral proposition, some of them are written examinations, but as a whole we believe the examination for entrance has not been very severe, excepting in a very few corporations. Formerly there were no entrance examinations, consequently, the rejection of apprentices for the first month or two was extremely large and this led to a dissatisfaction which became personal. We have a written examination which requires from three to four hours and from which we reject many applicants, even those who have been three and four years in the high school. We find they can forget in one or two years practically all they learned in the grammar school and we believe they would forget what we taught them in equal amount of time. We do not have any set passing mark, but find much valuable data regarding the applicant in his examination including his weakness and by being acquainted with this we can build better by so knowing.

Question 32, page 28; "Are you receiving as apprentices, students of trade, vocational, industrial or pre-vocational schools?"

The answers would indicate that few corporations get many of these students, neither can they expect to for the reasons that many of the students from these schools imagine they have all the knowledge they require and immediately try to sell their services as journeymen.

Question 33, page 29; "What may be said as to the comparative efficiency of these students with those coming from the ordinary public schools?"

The majority of the answers would indicate no experience. Some state that they should be better, but we believe the question is answered by No. 32.

Question 34, page 31; "Is the instruction offered by the various trade schools practical from the manufacturers' point of view?"

The answers to this question appear very charitable and we believe that is the general feeling of all corporations. At the same time we believe the majority of corporations do not derive any extended benefits from trade school instructions.

While the above is most excellent information, it is believed this questionaire could be greatly broadened. It is appreciated although that the fifteen questions has made quite a volume, yet there are many more questions that we believe corporations could be benefited should they be discussed.

We would suggest the following subjects:

1. Is it better to pay a high rate at start of apprentiseship or a low rate of pay?

2. Should the apprentice furnish a bond to be forfeited if he does not complete his apprenticeship?

3. Should the apprentice be directly under the shop foreman or an instructor?

4. Should the apprentice act as a coach?

5. Should the apprentice be paid wages while receiving theoretical training?

6. Should the apprentice receive his theoretical training during working hours?

7. Where can instructors be obtained?

8. Should instructors be theoretical or practical men?

9. Do the corporations have the boy enough at heart or do they use him as a regular commercial proposition?

10. Should an apprentice work duplicate work?

11. Is it better to work apprentices upon schedules from one machine to another or should he take the raw material and complete the job?

12. Should the different grades of apprentices all work in the same room?

13. What would be the effect if they were graded as in public schools?

14. Should a boy be dropped on account of his disposition?

15. What is the best age for a boy to start his apprenticeship?

THE CHAIRMAN: Mr. Trinder of the Connecticut Trade Schools will now speak to you.

MR. F. J. TRINDER (Connecticut Trade Schools): Mr. Chairman and Delegates, gentlemen—I think very few people understand the benefits derived from State supervision of Trade Education.

Many people believing that the public schools have made a failure of manual training assert that the responsibility of teaching the boy a trade rests entirely with the manufacturer or corporation.

The corporation is not operating as an educational institution. Its business is to tend to its own private affairs and pay dividends. We should not ask it to take the uneducated boy and teach him a trade. A few large concerns may operate large apprenticeship systems, but the smaller concern cannot do so, consequently the output of trained mechanics is small due to the limited number of boys who find the opportunity to be placed as apprentices by other than large concerns.

The State of Connecticut through its system of trade schools offers *every* boy an equal opportunity to learn one of several trades as he may choose in keeping with his inclination or natural adaptability for a particular trade work. When the boy successfully completes his course of training he enters the field as a trained workman. He is assisted in hewing for himself a definite and safe path for the future.

Cities wishing to conduct trade schools of their own can do so, but they receive state aid only when they meet certain standards of instruction and submit to supervision and regulation as required in a basis of approval issued by the State Board of Education.

The State requires that a student be well trained. Manual training is not considered trade training. The law of 1909 created two State Trade Schools, one at New Britain, the other at Bridgeport. The experiment proved a success. The law of 1913 intended to broaden the scope of the work.

The words Trade, Vocations and Avocations formed a part of the wording of that law. The latter particularly was soon taken advantage of by local schools and communities who saw in the word avocation an opening for state aid even though the system of work carried no element of efficiency or tangible purpose except the very vague claim that it offered relief from study and *might* lead to some purpose in the welfare of the student later on in life.

The law of 1915 is free of all the ambiguous wording by specifying instruction in the arts and practices of trade and vocations, and full responsibility is placed with the State Board of Education for the carrying out of these provisions.

That the state approves of the advancement of Trade education is evidenced by the fact that in 1909, $100,000 was appropriated—in 1913, $200,000, and in 1915, $250,000.

Plans are now under way for a State trade school in Torrington and one in South Manchester making five in all—New Britain, Bridgeport, Putnam, Torrington, South Manchester, with the Boardman Apprentice Shops of New Haven, a State aided school, but one of the best of its kind in the State. The Waterbury Continuation School for apprentices in the factories and the continuation department of the Hartford High School also receive State aid.

When the public schools undertake to teach the boy a trade they should guarantee him as thorough training as he would receive at the General Electric Company Apprentice Schools. Then the boy will not need Vocational Guidance at the hand of idealistic uplift committees, for the reason he will have educated ability to sell at the market price in any part of the State or country.

That the apprentices in the Connecticut trade schools are thoroughly trained is evidenced by the fact that we have more calls for graduates than we are able to supply. It will require constant expansion in the way of increased facilities and equipment to meet the demands in the output of graduates.

We are often asked the question why we do not accommodate greater numbers of students with the same unit equipment. There lies one great fault with schools, the work of which does not come under State supervision. The passing of students in groups with its consequent insufficient instruction and work will never turn out a good mechanic.

It is necessary to educate local boards of education and the school master to see that a unit equipment has its legitimate possibilities in student hours of instruction, also that it requires time and frequency of operation to make the instruction permanent and familiar to the student mind. To make a good mechanic a boy must have brains and adaptability; high grade men as instructors and a good workable concrete system of instruction are essential to success.

As part of the system of training let me mention the House Building Departments. The school will take a contract to build a house. The idea of style and design is given the carpenter apprentice as an architectural drafting subject. When this is approved the specifications are prepared. The drawings and specifications are examined by the students and foreman of the plumbing and painting departments, then lists of material are prepared. The ground is marked off, batter boards placed and at the proper time framing begins. The house is built, plumbing and heating apparatus installed, painted and decorated, all to meet the wishes of the customer. Other trades are treated with equal thoroughness. All work must have its commercial value by which to establish the proficiency of the boys' training and work.

We believe Trade education is just as cultural as any other system of education. The academic studies correlated with the trade work are superior to those given in the ordinary high schools. They are acceptable and fit into the make-up of the average boy more than do the dead or foreign languages. (Applause.)

MR. HENDERSCHOTT: I believe the speakers should respect the period of time allotted to them on the program. Delegates have come here from all over the United States. At both of our previous Conventions there has been criticism that the delegates did not have a chance to take part in the discussion. This year your Executive Committee has limited the addresses so as to permit of time for discussion. Now when a speaker exceeds his time he does so at the expense of the other gentlemen who have come here and I would like to ask the speakers on behalf of the committee if they will not respect the time allotted to them on the program so that each person, who so desires, shall have an opportunity to take part in the discussion. I think that is only fair to all of the delegates.

MR. TRINDER: Mr, Chairman and members of the Convention, I beg your pardon for infringing on your time and the time of this committee. Thank you. (Applause.)

MR. A. W. EARLE (Winchester Repeating Arms Company): Mr. Chairman, may I interrupt for a minute, the time is opportune. The last speaker came from Connecticut and extolled the beauties of the Connecticut system. The Connecticut system of education is beautiful. I am a member of the advisory board of one of those schools and I object very seriously to the rosy view which is given to the results obtained there.

THE CHAIRMAN: I will now call on Mr. Hicks of the International Harvester Company.

MR. C. J. HICKS (International Harvester Company): Gentlemen of the Convention, I am going to take these few moments, not so much for a discussion of the report, as to bring you something from the experience of the International Harvester Company in its shop schools. One of the advantages of the Conventions of this Association, one of the things that is of the most use and of most value is that it is a clearing house for experiences.

I came here as one delegate eager to learn what you, representing other organizations and other corporations, are actually doing in the line of corporation schools, and so I take advantage of these few moments to summarize the work of our three schools at three of the shops of the Harvester Company.

There are about three hundred boys altogether in these three schools and each boy is given the opportunity of a four-years' course, provided he needs that much of the course. It is a four-years' course of about four hours a week on company time. These schools are not strictly apprenticeship schools, and in this I think they differ from some of the schools of the other corporations represented in this Convention. We have a large number of apprentices among those three hundred boys, but we also have others who are not taking apprentice work—that is, opportunity is offered to every boy under twenty-one who is employed in these three shops to enter these schools on exactly the same par as the apprentices. The one difference is that the course is compulsory for apprentices, but voluntary for others. The only requirement for admission to the school and all its privileges is that the applicant have a speaking knowledge of the English language. He is then fitted into this four-years course at the point for which his previous preparation fits him. If he has only a speaking knowledge of the English language, he begins at the very beginning of the course. If he has gone through some public school he can fit in further along, but each boy is entered at the place where his previous education qualifies him, and he is mixed in with the apprentices.

In a second respect our schools are not strictly apprenticeship schools. They are not only open to others as well as to apprentices, but the course is not designed primarily for apprentices; it is a much broader course than it would be if it were prepared with the object of training apprentices for a particular trade. We are trying to interest and train every boy who is employed anywhere in any one of our shops, and we give him this opportunity to help himself. We teach him to do for himself and thus improve his position in any line of work in which he may be employed.

The course of study is a broad one; there is as much emphasis placed upon English as upon shop arithmetic; and as much emphasis upon civics and citizenship as upon mechanical drawing. The aim is general development as well a technical training.

Now such a course, we find, is needed not only by the ordinary boys who come to us, those who are largely foreign speaking, but it is needed as well by our grammar school and even our high school graduates. The last two years of such a course the boy, even if he comes fresh from the grammar school or the high school, finds it is well worth while to undertake; and we find it worth while to put him into this school and have him spend four hours a week for four years on company time in order that he may get the training that the school affords.

Prior to this last year these schools had nothing to do with the selling organization, but we have started a plan that will be of interest. We have no salesmanship school in the International Harvester Company. Our salesmen are trained in the school of experience and always have been. We find there are many boys in the shops who are eager to become salesmen, and this year we have started the selection of a group to be trained for work as salesmen. We have started with only one boy from each school, selected by the superintendent and class instructor as the student most worthy of training for the sales department. After the boys thus selected have finished the shop school course and have received some supplementary training in the shop, they are given positions in the sales department. And we believe that this is the beginning of a plan that will provide large numbers of boys who will go out from our shop schools into the sales department of the International Harvester Company.

The query has been raised as to the benefits of this shop school work, whether they are tangible and immediate. I want to say that the International Harvester Company does not consider this subject altogether as a matter of getting immediate benefits, and yet it has been noticed throughout our shops, noticed by superintendents and by foremen who have been watching the effect of these schools upon the help, and they tell me that we do get an immediate benefit. I don't mean the first day the boy enters, but within two or three months, these foremen throughout the shop can tell which boys are in the shop schools, as it is evident from their loyalty and interest and efficiency. For this reason our superintendents and foremen know that we do get immediate benefits. (Applause.)

THE CHAIRMAN: We now have fifteen minutes of the time left, five of this belongs to the Chairman of this committee. Whoever cares to discuss this question further now has the opportunity. Five minutes, I believe, is the limit of time that I may allow any one speaker.

MR. J. E. BANKS of the American Bridge Company: The American Bridge Company has several plants that carry on school work. We have the apprentice schools which take in boys of certain age limit. There are also schools for employes of any age or position. The latter schools include some, even, who are along toward middle life. The intention is to offer instruction to each employe in the subjects closely connected with his work, and to have this instruction given to him by men trained for such work. For example we have in the schools, students in all different parts of arithmetic, some are even in the beginning of arithmetic. One of those I recall is a foreman of forty-five to fifty years of age. This man had but little education in common school and he had never before occupied any place high enough to require much calculating. But he has now reached a position where he must have further knowledge to do his work right. He also wants more English to be able to write his reports properly, spell them properly. These schools have had the result of giving opportunity, to the man who has the ambition, for another advance. This man felt that even though he might be older he still had a chance to learn and be benefited by it.

It has been the policy of the American Bridge Company, since extension school work was started nine years ago, to pick a man of the school for advancement if doing equally good work with other men in the shop. On starting one of our new plants a number of such men were chosen. Of these several had left school too early, and so had no other chance to finish their education, to fit themselves better mentally. They had gone into employment educationally unprepared but were good reliable men otherwise.

There have proven to be excellent results from the school work. One is that the shop man and office man are brought together in recitation. They sit together when taking the same subjects. I have a class now that is evenly divided in the number of office and shop men. This association has been important for them socially, it has in all ways been good for them. It has been the occasion where they really had to come close together and learn the touch of one another. The office man who has been in the school with the man from the shop meets him and speaks to him with a different feeling. He finds he is another sort of a fellow inside from what he might have thought him to be.

The School has brought into the drawing room some very good men from the shop. With variable shop experience to fit them, and with theory gained from the school, they give a good balance to a drawing room squad. I remember an engineer saying one time that he had found that the ordinary draughtsman could not "see over the edge of the drawing board." A man of shop training is not of this kind. The shop man knows from shop experience how the work must actually be done. It produces a result in him that no theory alone could produce.

FRANK H. BALL (Director of Industrial Education of the Public Schools of Pittsburgh, Pa.): I only want to say just a word from my own experience in regard to the Ambridge School. We have been very glad indeed in our evening schools of Pittsburgh to employ a Mr. Smart who is connected with the Ambridge Works there. I do not know whether he is one of the teachers during the day or not, I know he is a teacher very successful in public school work because he brought with him into our industrial classes there in Pittsburgh practical experience. He has been handling the young men from the draughting rooms as well as the plumbing class this winter in one of our industrial schools; so I want to add my endorsement of the Ambridge School and their distinctive methods.

MR. F. W. THOMAS of the Atchison, Topeka and Santa Fe Railway: We have been talking a good deal about the apprentices. I would like to hear something about what they are doing on the subject of shop instructors. There is such a thing as going too strong on the school or theoretical end of it and neglecting the shop or practical end. We have one practical shop instructor for every twenty boys. I would like to hear what the other fellows are doing with this important part of training apprentices.

THE CHAIRMAN: There are others, presumably, who have had experience not only in the school proper but in the shop school where they are teaching the actual trade and how to do this, that, or the other thing with the planer, the level or the shaper, is that the idea?

Mr. A. W. Earle: Someone who has actual experience in training.

The Chairman: Yes, someone who has had actual experience in training or teaching these boys in the shop in the particular trade at the lathe, at the planer, the shaper.

Mr. J. F. Raymond (The Winchester Repeating Arms Company): Mr. Chairman, I did not come here expecting to speak and I am not prepared to do so. I am simply attending your Convention as a guest, and if the purpose of your organization impresses me I may decide later to become a member of the Association.

Seeing the red and green light located at your desk to warn the speaker when his time is up reminds me of a story of an Irishman who was appointed as watch upon the deck of a steamer, and instructed by the captain to report if he saw anything ahead of him. After he had paced up and down the deck for some time he suddenly came running back, calling to the captain who replied: "What is it, Pat?" Pat said, "I see something ahead, but I do not know what it is, for first I see a red light and then a green light. I guess it must be a drug store." (Laughter.)

Our company started an apprentice school in 1911 for the purpose of training apprentices for all-round mechanics who are not very plentiful at the present time.

Before starting it I visited several schools of this kind for the purpose of getting information relative to starting it. While visiting the different schools I found each one had a little different system for handling its apprentices, and after summing them up as a whole, I decided ours would have to be different from those I had investigated.

Our company said that it wanted to get all-round mechanics and wanted to get them quickly, so I had to apply a system that would give the quickets results. After considerable thought we decided that a course of apprenticeship on general work might do it.

We do not believe in putting an apprentice on any particular machine such as a lathe, planer or shaper for a definite length of time.

This is the way we handle the apprentices—we take them when they first start and place them under an instructor. Probably their first work will be to clean the machines and run errands for a short time. Through this method they become acquainted with the machine and the working of the factory. After that we give them some simple job, probably lathe work. Next a combination of lathe and milling machine work, and so on.

By this method in a short time the boy is commencing to show proficiency. The more apt he is the quicker he shows efficiency and by this method we can determine whether the apprentice has initiative and mechanical ability.

Our system has worked out so well that we have apprentices who have served only 6 to 8 months who have built automatic machines and fixtures as good as journeymen mechanics could.

Of course, while we find good material among our apprentices we also find poor. Often we have to drop them although we give them every possible chance to make good.

We find, sometimes, that boys are influenced to try to learn the trade either by their families or by friends, and through such influence take up the trade without knowing whether or not they would like it. We find that the boys who decide upon learning it through their own convictions usually make good.

We give the apprentices one hour a day in the lecture room during which time they are given lectures on elements and principles of machine construction. We also give them catalogue study which helps them to become familiar with the various kinds of machines that they may be working on.

We have found from experience that another important factor toward helping to develop the apprentices is to give them a sufficient supply of measuring tools which they should have in order to do good work.

The apprentices are given a course of study in mathematics which includes common fractions, decimal fractions, square root, ratio, proportion, specific gravity, algebra, plain geometry and trigonometry.

All applicants have to take an examination which they must pass with a grade of 80% before signing the agreement paper. We find this to be very helpful in selecting the promising material.

To teach the apprentices the construction of the machines, we take them into the lecture room and place a picture of some machine, for instance, a lathe, where the apprentice can see it. We explain to them all the various parts and what they are used for, then, later on, we review the machine and make them explain how it is constructed, naming the different parts.

By instructing them in this way, then putting them at work in the shop upon the same sort of machine, they quickly get on to the construction of it and learn the various parts, what they are made of and the cost of the machine.

We teach the boy to plan and lay out his work, also to learn the various speeds and feeds recommended for the different material upon which they may be working.

If the apprentice completes his term which is three years, satisfactorily, he is given a bonus of $100.00 and apprentice's certificate.

College graduates are given a special course on machine and tool construction and work in general about the factory. After they have completed this, they are given the executive positions for which they appear best fitted.

The number of apprentices placed with an instructor depends upon the nature of the work. Where it is very particular and needs close supervision the instructor cannot handle so many apprentices at a time, and give them proper instructions on their work.

About 90% of the apprentices remain with the company as journeymen.

We have a number of our graduates holding positions as foremen.

If I had known that I was to be called upon to speak I should have been better prepared. However, I have tried to give you a little outline of what we are doing in our school, which we think is as good as any in the country.

I appreciate very much the cordial welcome you extended to Mr. Earle and myself as your guests and hope that we may be able another year to meet with you as members of the Association. I thank you.

THE CHAIRMAN: The time for the open discussion is up and I will ask Mr. Larkin to close this session.

MR. LARKIN: Mr. Chairman, ladies and gentlemen, I am sure that everybody is pleased with the discussion that has taken place, and one of the most gratifying things this afternoon was

Mr. Bardwell's criticism of the committee for not having the presumption to put in what you might call a foreword in our advance report. As he came in after I had read our report I presume that he will forgive the committee for not having handed that to the Executive Secretary before. What he outlined to be included is precisely what we have attempted to do, and I think when this is published that he will find that the work has been well covered. The results have been gratifying. However, it has been a big job to get the material together and compare it. And to the next committee I wish all success.

Thank you, gentlemen, for the kind attention you have given the report and discussion, and I hope that when the proceedings are published you will find that the results we have achieved, the answers to the questionaire will be of some value, because they will be of no value at all unless they are used. I am sure that if those who are contemplating the establishment of schools, or the bettering of their present methods, will refer to them, they will be found of value. Thank you. (Applause.)

ROUND TABLE DISCUSSION

TRADE APPRENTICESHIP SCHOOLS

TUESDAY EVENING, JUNE 8, 1915

THE CHAIRMAN: The purpose of coming here tonight is to discuss in an informal way the papers that were read today and any problems on trade apprenticeship work that any of the delegates may see fit to bring up.

Who wants to start off the discussion, and what is the first subject to be discussed?

A DELEGATE: I was called to order by the Chairman today and I would like to finish up here. I was just going to say that we have found the efficiency of the college graduates employed at our factory to have been greater than ten per cent. We hold about 35 per cent. of the college men who have come into the shop during the last three years, which would mean that we have lost 65 per cent. Now nearly all of them have gone to what we consider higher positions outside. Practically none of them have left because of our wish that they should leave. We have taken particular pains in the last few years to pick out men according to specifications, so they know in a large measure where they stand before they are accepted. Incidentally we are really glad to give away a good man to customers, as he becomes an excellent adviser, and, since he still remains a good friend, it often leads to many good connections.

A DELEGATE: I want to say a word on this college proposition. I have had the privilege of teaching college boys for about ten years. I have also had the chance for four or five years to see the other side of it,—to see the boys in the organization, to see how they are handled and how they work out. I think that those who have made very much of a study of the question at all will realize where they cannot succeed in getting a high grade of efficiency out of the college man, that it is very largely a fault of the corporation. Now a college boy throughout a course of four or five years' training has been put through a certain definite scheme. We must bear that in mind. For instance, he has been accustomed to have someone lay out his schedule for him and to have someone tell him when he is right and when he is wrong. He is full of enthusiasm. He wants to do something. He has not as much initiative, possibly, as he might have, but if you take that boy and you put him in an organization, give him the advantages of a special apprentice course, or whatever it may be a training for, as well as work of a more executive character, take the trouble during one or two years' period of training and trying to adapt that man to your organization (for you must realize that he has not had very much practical experience, and that he is very much self centred), capitalize on his enthusiasm and on the fact that he is accustomed to do work according to schedule, and, at the end of a year or two, when he has found himself, when he has mingled with men, when he has been down in the shop and worn a pair of overalls, when he has really found his real level, when he has tried to get along on a small salary and support himself, when he has gotten some of the spirit of democracy in him, then the general experience in regard to him is that he really does become very successful. Now I do not mean to say by that that you will find that there is more than an average of ninety per cent. that would be successful. I mean that by going around among the colleges and picking good men, out of those good men that you have selected there is no reason in the world why you could not have about ninety per cent. of success.

The things I like more than anything else in the college boys are these two things: He is more democratic as a rule, and he knows how to work in and talk with the other fellow. He is so very enthusiastic that if you can only preserve that enthusiasm along with a little of that old association feeling, let him keep the idea that he has some will or ideas of his own that are of value, if you can just have a little patience with him over that period of your systematic training, you will find that he has the power of analysis that comes from studying engineering problems which is as valuable as a knowledge of where to find things. I know that in a great many cases if I were to pick a man for a job I would prefer to pick a college man who had one or two years' training in the school of hard knocks, rather than take the man who had not had that training, assuming, of course, that you have the privilege of picking a fellow with a fair personality. I do not mean to say that the college man is superior to the ambitious fellow who has not had the training, but I say if you can get the man with the personal characteristics you want, with the training and, also, with a period of adjustment to surroundings of a certain number of months or years, if you take the average of two or three men you will find that you have more to gain from the college fellow. I think that is plain from the experience that is to be found in a great many of our large organizations, as for instance in our own company, and a great many other companies. But you must have a certain amount of patience and when you get up organizations a great many of the old line men, who are not technically trained themselves, are reluctant to overlook the boyishness in the young fellow, not realizing that in a couple of years that can be taken out of him. I therefore do not quite agree with the statement that was made this afternoon when that high per cent. was given; I think that the percentage of success will be very much higher if you carefully pick your men at the start.

A DELEGATE: I do not think, Mr. Chairman, that we want to spend too much time on this, but it seems to me that our friend made a mistake in drawing his conclusion from so small a number of men. I think in his reply to my question he said they had in the office about sixty men. Now we all know that there are men who go to college and manage to graduate from our engineering departments who ought never to have gone there. They are a problem for the faculty. And when it comes to discussing the final matter it is a question whether this boy will be allowed to graduate or not. I grant you that it is possible by taking young men of this sort to have ninety per cent. failures. But where you go about it in the right way and select your own men as our company has always done, there is certainly no room for drawing the conclusion that he has drawn. I happen to have some figures right here in my pocket which I will go over hurriedly. In the past ten years in one of our plants we had 2,649 college men. Some of those are still in the testing department and are developing, and I do not believe that I could pick out 149 failures out of that 2,650 men.

For the past seven years 55 per cent. of the men we have brought into the testing department have stayed with the company. And a great many of those who have left, we arranged to have go with our customers, to whom we were very glad to give them. It has been the policy of our company for the past fifteen or twenty years to give good men away to our customers like that. We do not feel that it is any loss to us, and we are thus in a position to help our customers out in that way. When we recommend a man to a customer we think he will make good, otherwise we would not recommend him.

But the college men realize their shortcomings. They come into our works with the general attitude that they have a good deal to learn from the practical men; they touch elbows with them and get the other workmen's point of view. They feel it is a part of their education and training. We are meeting a situation different from that which we had to meet with the college men twenty-five or thirty years ago. The average college man who comes into the corporation today realizes the situation,—he has common sense; he thinks.

A DELEGATE: What is your method of selecting the college men?

A DELEGATE: Briefly, we depend largely upon the recommendation of the professors after we have checked the professors. For instance, it has been my business for a number of years to select men, and I have visited the colleges and have become personally acquainted with the professors and I am willing to take the judgment of those whom I know. I go around occasionally and see the professors, so that I might say that our plan is a mixture, we do some of the selecting, although the professors recommend the majority of them. They know what our specifications are, and if they send a man who fails to measure up to the specifications they will hear from me pretty fully on the subject, so they are very careful in making their selections.

A DELEGATE: Can you outline your own specifications very briefly?

A DELEGATE: That is pretty difficult to do. I might say this, that failures,—and I think I have said this to one or two others here this afternoon—the failures we have had have been due entirely to the personal characteristics of the men, that is the men were lazy, or they have acquired habits that interfere with work when they come to take their technical training. This has been standardized so thoroughly by colleges and universities today that their courses are practically the same all over the country. For instance, we want a man who is industrious. We want a man who has good personality, because he has to work with others. He is going to be part of a great big machine, and he has to fit into the organization. I might say that some of the colleges are giving attention to personal qualities to-day, the finer qualities, and they are not only considering the percentage that the man makes in his direct examination papers, but they are considering his personal characteristics. If they see anything or observe anything that is going to interfere with his success, they call attention to it.

I think Purdue University has the right idea. The members of the faculty call attention to this first, and there is evidence to show that all colleges are beginning to realize that they must pay more attention to it. They are paying more attention to these things in the personnel of their student body.

A Delegate: I was going to ask Mr. ——— if he would consider that the fellow who was trained in his special apprentice course and then left to accept a better position, not especially with one of the company's customers, but with a competitor, was a failure?

A Delegate: No, we are sorry, but we would not consider him a failure.

A Delegate: Then you consider the value of the system from the service that he actually renders the company and not because of his leaving?

A Delegate: That is it.

A Delegate: Am I to understand, Mr. Chairman, from what Mr. ——— says, that in eleven years he has hired 2,649 college men and at present they have with the company about 1,300 of those?

A Delegate: That would be about the figure. The percentage at this present time would be about 55 per cent., that is, those that we have left in our testing department would be 55 per cent. of the men now in the ranks of the company and 45 per cent. are with our customers or with the others to whom they have gone.

A Delegate: Mr. Chairman, in justice to our friend who this afternoon made the statement about the percentage of people who stayed with him, I think it is perhaps due to the fact that his apprenticeship system for college men is not as extensive as it is in companies that hire so many such men. His proposition seems somewhat along the line of a ship building concern's such as ours. We have no special apprentice course for college men although we hire a good many from time to time; I do not know what the percentage is, I do not know how many come across our pay roll during the year, but I know it is a very small percentage of those who stay. This is due perhaps to the fact that some fellows who come in, through no discouragement which we intentionally give them, feel that they will never make ship builders and so they decide that they may as well give up and go into some other work. Our friend of the ——— Railroad did not explain that to us.

In our companies we know that the percentage of the fellows who naturally feel they will never make a success at ship building is very great. They prefer some other line of work, for instance, electrical work, and so they quit. We hold a good many, but we have no special apprenticeship course for them. They are, however, always more or less under observation and of course we encourage them where we think encouragement is due to them, because we realize the necessity of having such men on our staff and of holding them. We need them naturally in the organization and we have no trouble in finding places for those who may come to us.

A Delegate: May I have another word, please? My experience shows me that the college man objects to drifting, he is willing to take a couple of years after he has graduated to fit himself in some special work, but he wants to have a pretty definite line on that work, so unless you have some general scheme to follow out, I don't believe you can attract and hold the best men,—I think you would have difficulty in doing that, that is if you pick up men they will not be of the high class men. And perhaps you have found difficulty in getting positions for them. As a rule the college man objects to drifting, he wants a certain definite thing in mind, something he can keep his eye on, and, as I say, he is willing to take a couple of years to do routine work.

A Delegate: A good many fellows come in to get two years' experience in our draughting office. They come in with a definite purpose. They have their own plans which they are following out, some course that they have picked out, and they come in with the intention of staying only that length of time. In some cases we know it when they enter and in others we do not know it. For instance, if some fellow who is a native of that immediate vicinity, a graduate of a technical college, comes in, of course we wish to give him what preference we can, other things being equal, for we wish to train up a corps of men who are natives of the vicinity. So a native has a little the best chance, as he is the kind of fellow who makes the most satisfactory man on our staff.

A Delegate: The ——— Railroad has had special apprentices for years, and their training seems to be entirely different from that of which the railroad man speaks. We have special apprentices—I am not in that line, and I can only give you a general outline of what their policy has been:

There are mechanical engineers coming through the four years' course in the shop; then they go through the motive power line, what we call the cars and engines. The civil engineers start out as chain men, rod men, transit men and assistant superintendents. I guess they were about the first company to have special apprentices. I believe Ex-President ——— was a special apprentice; and the vice-president was a mechanical engineer and another executive was an assistant engineer. That is, generally, from the special apprentices come the mechanical engineers and the civil engineers; they all develop into that general line. I understand the ——— Railroad policy is to promote the operating men and not to train them as the other railroad has, so the two systems are different in that respect.

A Delegate: Mr. Chairman and gentlemen, a few years ago we had a highly technical man, a general superintendent of motive power in the ——— Railway. People seeing the idea as it worked out see that we established a specially difficult service there. He got about six or eight graduates of the testing schools throughout the country and, being himself merely a technical man without much of the practical in him, he made a failure as superintendent of motive power and so lost his job. The company, after a while, placed him under my jurisdiction while I was engineer of testing on the road, and the result was that he spent most of his time in the testing department and very little time in the shop; the result was that the special apprentices learned much about testing and very little about shop practice. We have had about 65 apprentices that have graduated and about 40 that have left, so only about eight per cent. are now working with us.

We have a more difficult proposition than many have in selecting our men to work with. In reality we have to pick from the crowd after somebody else has taken the best of them, so that we do not get the best men. The electric companies and the other big corporations go to the testing schools and engage in advance of graduation those men of the Engineering Department that are worth the most so that in this way the cream is taken off of the milk. After this the railroad company has to take what it can get, since it has no representative who can go out to select men. As a result, we do not get the best men.

Our great trouble with special apprentices is that they work too slowly. The trouble with all our schools and colleges in the country is the same. I saw the boys downstairs running the planers and other machines as we were going through the building and I asked one of them why he ran it so slowly. He said that his instructor had so told him to run it. The instructor heard me talking with him and when the boy mentioned what I had said to him he wanted to know what I knew about the running of machines anyway. I asked "Why do you run the machine so slowly?" His answer to my question was "Whom do you represent?" I told him I represented Mr. ————. "How do you teach your boys to work?" I told him "We teach them to go along with a job as fast as the machine can go, speeding it up to the limit, and we expect our boy to do the job in a minute where this fellow takes a hundred minutes to do it. In other words we speed the boy up to about 85 per cent. of the speed of the journeyman, if that is at all possible, and then we will let him gain the other 15 per cent. with practice. We let the apprentice know that there is a certain amount of work that has to be done in a day, and in order to do that he has to keep a certain speed. This combined with the knowledge that the work must be done accurately is conducive to speed, and the boy comes through his course keyed up to the idea that he cannot sleep on the job and hold his place." I told the instructor that our foreman expects the boy to work. Men coming through under that kind of training and under the kind of training that we witnessed this afternoon would come through with two different ideas in their heads, and they would make two different men due to different training. Accuracy first, of course, but speed with accuracy.

We naturally think a man coming from college knows more than the man who has been through merely a trade school. Education will do a lot for him naturally and it will teach him to reason, but the majority of the college men who come to us are devoid of all reason, they are simply helpless when turned loose. I say that that is the fact with about eight-tenths of the boys we receive with all training that they have received.

About a year ago I tried another tack. I decided to take boys from the universities, but I would not employ them unless I had a personal interview with them. College professors and most teachers will give a good letter before they graduate. There is hardly a college in the country that studies a young man to see if he is fitted for the profession that he is undertaking. None of them take any pains to examine a young man to see whether he has had any inherent ability, they simply graduate anyone who comes to them, if he passes even barely by a certain percentage. If he studies a given subject, whether he is fitted or whether he has any talent or brains or anything of that sort, they graduate him just the same; so long as it increases the output of the college and the amount of money which the college receives for his attendance, why they think their institution is progressing. Many of us are finding that out now.

We take these men now and put them in charge of our road instructor who gives them a certain course of work. First they are given a regular length of time on each machine—the planer, lathe, shaper, etc. They do not seem to have gained any specialized information in college, which will give them any direct idea of actual and practical work, so we give every college man that we take on the same special course that we give our journeymen apprentices. After the special apprentice work the college man works for two years in the shop where he gets a good understanding of practical shop work, and where his efficiency is put on a level with the workingmen who are there. Here he may compare his work with that done by those around him and he thus has the opportunity of bettering his own work.

Three years ago we took a fellow out in the roundhouse, that is of all places the hardest. There the boys have to do the cleaning up and have to keep it open. There they are impressed with a most important fact, one that is considered of the greatest importance—being on time. If a locomotive is ordered for a certain train on a certain minute it means exactly that minute. If it is eleven o'clock it means eleven o'clock, not eleven three or eleven five or eleven thirty, but eleven o'clock. The boy works there four months, and in that time he learns about everything that a man or a boy can learn about a roundhouse. After that we put him into the office for a period of two months to make a car whacker of him. He works side by side with the journeymen apprentices. After that we put him in the boiler shop to learn about locomotive boilers. The Government restrictions on inspection tests on locomotive boilers are so rigid that it is here then that we try to test the thoroughness of the boy's work. Then we give him two months as an assistant traveling engineer with our Foreman of Maintenance. The Foreman never leaves him for any cause whatever except to sleep at night. After that he is brought back to the original shop and put on road inspection work. He may be made inspector of anything as of engines for the shop, determining what should be done with them. He has one month of outgoing work to see that the work he has reported has been done. We hope then at the end of this time by this plan to properly launch the fellow. We have set the first six months as a period of probation. We have a committee of local master mechanics, journeyman foreman, gang foreman and apprentice foreman formed to look over apprentices. In the first six months they decide whether a boy has the necessary qualifications for railroad work, for an executive or an engineer according to the sort of man needed. They try to decide whether he is worth the time which he must put on the apprenticeship work. If the committee does not think he possesses the necessary qualities they assist him, and if he does they assist him. After two years another meeting is held to see whether that man possesses enough executive ability to make a foreman. If he does, he is given the third year of special work. The Apprentice Board will not follow that man or sign petitions sent around to them. They must hold a meeting and by conferring with one another pass on the man's life work. They give much thought to him since they know that if he remains they must associate with him in the future, that he may be a junior officer of the company very soon, that he may be over them or working with them, and they are made to feel that they are responsible for his coming into the company.

Our railroad company does not allow us to go outside to hire men for the higher positions. We cannot hire any gang foremen or roundhouse foremen or road foremen or master mechanics. Our instructions are to promote all our own men. Such a man must be familiar with our methods and practices. These instructions are given for a specific purpose, which is to train these young fellows to fill the higher positions in the organization.

I feel a personal responsibility myself because it remains largely in my hands to train these men correctly. I have exercised what little brains I have in trying to get the best out of the college men. So far as they are concerned, with us they have been a failure. I hate to say it because I have been responsible for them, but from the material I have had to deal with that has been an unavoidable conclusion. I think the reason for so many of the failures of the college men, as I said a little while ago, is the lack of attention to them on the part of the schools and universities. I think it is up to the professor to tell a young man whether he thinks he is qualified to do the work he wishes to undertake. I personally believe the time is coming when the teachers in the public schools will say to a boy or to a girl "You ought to stop school and go to work," and to others, "You ought to get more schooling, more of the higher education."

A DELEGATE: Having been a teacher in college for ten years I suppose it proper for me to say something regarding the college standpoint. I think the previous speaker is entirely just in his statements. I do believe that a good many colleges are changing for the better in many respects.

I remember that this came up only a few years ago, that a great many boys who are in college are there more as a matter of pleasure, because their parents sent them, and so they are accompanied by a half-hearted decision to learn a mechanical or electrical trade.

They start in, however, fairly well prepared in high school work and pass through college as they will without any serious difference, going through a first year and a second year. Then there are certain pre-requisites, as they are called, which will enable a man to go along in the third year or which will stop him—for instance, calculus. Now he passes along third year with only a passing mark and with no real idea as to whether he is fitted to take a mechanical engineering course, an electrical engineering course, or a civil engineering course. A good many times it happens that the professors are so anxious to graduate large numbers from their departments that they let the man slide through. I have in mind one small college here in the East that has a staff of instructors who are extremely kind, who mean to be extremely careful and to see to it that the young men are guided into the right channels so far as is possible.

A DELEGATE: We should like to know the name of that school.

A DELEGATE: It is just a small college in New Hampshire called the New Hampshire State College, located in Durham, New Hampshire, and the president of the college I think you would know, Professor ——————. He believes thoroughly in watching the young men. I know that in this particular institution the head of the Mechanical Electrical Department is allowed to interview the boys before they enter the college. His idea is to advise with them to see if they have any fixed idea as to what they want to do, and to guide them aright so far as possible. At the end of the first half year the students are expected to go to their advisors who, even this early in the course, go over their work with them and tell them whether they are likely to go ahead with any success. They analyze the results with striking accuracy. They know what has been done by each man and so at the end of the first year, and again the second year, the same course is followed. By that time it has been demonstrated very clearly whether a man is qualified to be instructed further in electrical work or mechanical work. If he works better with his hands or with his brains. Frequently I have known students who wanted to be electrical engineers who have been switched over into what is called the Arts and Sciences course, and have ended up by being printers perhaps.

Now I think there are other colleges where this strain and criticism is felt and I think you will find that in a very short time the institutions will do a great deal better in recommending young men for definite positions. I know Professor ——— will not recommend a man for the General Electric Company or the Westinghouse Electric Company unless he can honestly say that he believes that man will make good with that company. The result is that there are some stragglers, not the average good college man, who perhaps get into the railroad shops.

May I say just a word for the particular work in which I am interested? I suppose I represent the corporation schools of the city. And as such I am supposed to be more closely posted on some of those things than perhaps others who are here from the same place. Take for instance in the City of Providence, there are a number of concerns, not large enough to support a corporation school, but very much interested in the necessity of paying their apprentices.

I have a problem in this city that is very interesting, I can assure you. I have ten shops this summer in which boys are placed. I am spending thirty hours per week in these shops right alongside of these boys. I have classes and go from one part of the shop to the other. I see some good things.

I have two questions in my mind which I hope may be answered this evening. I don't know whether they are questions worth while answering or not:

First, I would like to know something as to the average rate of pay for the apprentices, that is, after he has finished his course and has entered the railroad shop. I would like to have some idea as to whether he earns 25 cents or 30 cents an hour.

A DELEGATE: We pay 42 cents an hour.

A DELEGATE: Then the second question is when these young men are apprentices in these different corporations schools, is a bond considered sufficient, or is a cash payment required at the beginning of their trial? Also, what is done about the bond or payment, whichever it is or both, when they have finished? I would like to hear that answered.

A DELEGATE: We start our special apprentice out at $1.75 a day. We increase his pay 25 cents at each six months and at the end of three years he is getting $3.00 per day, just what we give the journeymen, who are working, what their rate of pay is for the locality in which he lives.

They do not have to give any cash bond or agreement while all other apprentices sign an agreement that they will serve the company for a certain period of time.

THE DELEGATE: Of course that paper is not signed until after they have had a certain period of trial?

A DELEGATE: We give them six months' trial, that is our probationary period.

Last July we employed a young man without ever seeing him. He was recommended to me by very prominent people in Massachusetts. He was one of the graduates of the Massachusetts Institute of Technology at Boston, and I employed him on the recommendation of those people without ever seeing him.

He left in a day coach from Boston, Massachusetts, for Cleveland, Texas, 2,000 miles on a hot July day. He had not shaved from the time he left home until he got down to Cleveland, Texas, two days. The result of it was that our superintendent was so shocked and mortified that a man, a graduate of the Massachusetts Institute of Technology of Boston should come that far and pay so little attention to his personal appearance that it simply poisoned his mind against the boy forever. The mechanical superintendent, when he came into his office, called for the superintendent and instructed him to take this man up town and give him a bath. The next week he had just the same appearance again.

His superintendent got along with him as best he could for a month or so. However, after he had been with us about two months he suddenly got the idea that he knew more than anybody else. He was so combative that I had to arrange to send him back to Massachusetts.

Mr. Chairman, I came here to learn, if possible, some new thoughts and ways of doing things. I am very much interested in what our friend said about the public school situation, and as I stand looking about I see two other men who were on the same board. That board is made up of school men and business men. I would like to know what it was in the city of ——— that the Board of Education could not endorse or accept. This question came to my mind—was it a reasonable request, was it a request that the school board could legitimately handle?

After having worked under Dean Schneider in the University of Cincinnati for some years, I have imbibed a good many of his ideas, and one of those ideas was this: It is better to put money into brains rather than into trade schools for which you must scrape together machinery once in seven years. Of course you know Dean Schneider is the father of co-operative work in this country, and he in his argument can see no reason why a number of tailors who are taxpayers have not as much right to demand a trade school for tailors as the manufacturer in the machine shop or machine line has the right to insist upon a trade school for his particular line. Those are some of the things I am anxious to find out.

I want to reply to Mr. ———'s suggestion that they have no professor in manual training. Yes, they do, and I know, if it were a commercial proposition you could secure all of the fellows that you need next Saturday night. I have one of those fellows from a New England College who, I believe, could not get through because he was too lazy. I have found him so now, and I cannot get rid of him because there is so much sentiment in the public school business, so much sympathy, so much pull, perhaps. I know I would fire that fellow next Saturday night if I could, because he is not fit to be a manual training teacher. On the other hand I have had in that same school some very good teachers. But that is the other side of the question. We have got a lot of those unworthies, and we know it, and I would like to see an opportunity for a revision of the manual training department of a lot of the public schools, not only the one that I represent at the present time, but those that I have represented in the past.

I remember once hiring a man on his face. By Jove, he looked like a prosperous banker, he was a great big fellow. He is not efficient, but I can not discharge him. He sticks in that same situation as a teacher of manual training because he is not worth a whoop at anything else.

But to return to the ——— proposition, I would like to have my question answered, if it is proper.

A DELEGATE: Well, gentlemen, I do not care to bring local conditions into this matter. You have asked if it were in the power of the Board of Education to improve conditions and I say it was. Now as to entering into any discussion with those whose feelings I have hurt, I do not desire to do so.

A DELEGATE: You have not hurt my feelings, dear friend, not at all.

A DELEGATE: Mr. Chairman, I hear a great many knocks for the college man. I would like to have a raising of hands here. How many of the men in this crowd are college men? (Raising of hands.) I wonder how many of you meet with your failures. We have heard a lot of criticisms. The problem that comes to me in the high schools of Detroit is the multiplicity of problems that you all have. We have about 54 different organizations sending men and boys, experienced workmen and apprentices, to school half a day a week, and expecting that we are going to give something that will benefit them directly and almost immediately. I have tried all kinds of plans, and I can get rid of any man I want to get rid of. There may be some pull, but if I want to get rid of a man who is not on the job I can get rid of him. The Board of Education has backbone enough to employ a man, and backbone enough to stand up and say openly and publicly that this man is not up to standard, and that is all there is to it.

A Delegate: There is a difference between your town and mine.

A Delegate: Yes, there is a good big body of fresh water.

A Delegate: That is not all the difference.

A Delegate: Well there are some purifying qualities in the fresh water. And I have found this, if I employ a man in the school who has had only shop experience, if a boy comes along and questions him as to what there is for him in pursuing a certain line of work, or whether it is more profitable to go to college, or whether he can get all he wants on the job or not, the instructor is not broad enough or big enough to tell him. On the other hand if I take a man direct from college who has not had shop experience, he is lacking on the practical side.

Now we have picked up several men in the right school, from the electrical and mechanical divisions, and something like an equal number of men in our commercial division who were not only practical men, but college trained men and they have made good.

I have a man in the machine shop who talks in the night school to a group of thirty of his assistants, all the way from the apprentice boy to the skilled mechanic, and gives each one of them some definite thing to think about. Inside of three or four years he will have every one of this set doing business, they have an interest in it.

And I have another man in the mechanical department who has a great faculty for job mathematics. He will take difficult problems in mathematics and make them over so that an ordinary mechanic, though having a limited training, can handle the mathematics. We find that while we have not anywhere near 100 per cent. efficiency in that man, he is exceedingly valuable.

A certain company sent to us two years ago last November, thirteen men. They had a contract with the company to stay 100 weeks at half a day a week in the school. Last month we graduated ten of those fellows each with a diploma in a different line. His practical experience, together with his school work, have qualified each man along a certain line. If a man has worked on five types of machines, the planer, the shaper, the drill press, etc., and done some assembly work we will graduate him as a machinist, but not until he has had at least two years' practical experience in the shop and has operated every one of the machines commercially is he supposed to graduate as a machinist.

Now the fact that this company and about fifteen other companies are sending their men to our shop right along, means that we are doing something for them. We do not put the machinist contracts in a separate department, but make a double-barrelled shop man of the apprentice. The apprentices are making good so far as these particular apprentices are concerned. One of these concerns is now going to send a large group of men for a 15-weeks' course along the same lines. As an indication of the spirit of these men in our evening school, and in our Saturday afternoon school, we find that we are training on their own time more than double the number of men that the companies are sending into the school from their own shops. So that taking the matter as it stands with us, when there is a college man, a man who is given a chance, I employ that man. I find him first in the shops; some one of our instructors is visiting the shops nearly all the time coordinating with men who are attending school. If I see a likely fellow in the shops, a fellow who looks good to me, I ask him to come to teach in night school. I hire the man and the man knows that the only recommendation I have for hiring him is that he make good and he knows if he does not make good in the night school that all I have to do is to take him off my list. By doing this I can pick up all the instructors I need. We have now 455 men and about 10 or 15 women. All the women of the commercial department come back to school half a day a week while in the pay of their employers and some 45 of them come to school on Saturday afternoons on their own time. They range all the way from assistant bookkeepers and heads of departments in the ——— Company, which by the way sends 250 of the total from that company back to school half a day a week and pay them for their time, to men in the boiler rooms, steam fitters, metre readers, and on up to men in the office who are expert accountants, who feel that they must go somewhere to learn the new side of accounting as applied to public service corporations. They vary through that whole line of work of these different companies from about 25 carpenters, 15 sheet metal workers, 10 pattern makers to those learning the electric machinists trade. That is a special proposition which is put up to the one public school in the City of ——— to help to solve. We have many problems to work out yet, but we find that by eliminating about 90 per cent. of all mathematics that goes under the head of algebra and trigonometry and geometry, and by working out mathematics from the beginning with only that part that the man needs to solve his special problems inside of two years, with the shop experience that he gets in any of our different courses, we will put him through so that he can use logarithms and sliding rules and tables. Also, we can teach him how to use the handbooks to get the proper formula. He then knows how to work everything that is required for his particular job with accuracy and with an increasing knowledge from day to day as he gains in experience.

A Delegate: I thought when I came down here, and looked at the correspondence that I have had with the men of this organization, that it was right and proper for the public to present its side of the question. I wanted to get at the facts and I wanted to get the advice of The National Association of Corporation Schools as to their requirements, and to see if they could not assist us and we assist the manufacturers.

I think we have assisted some of the manufacturers to this extent that we have taken 33 college graduates who have been in various departments and departmental offices as well as inspection work, and we are training them to read blue print and to make drawings. We do not go through the job of solid projection work, but just now are educating them in doing just the thing that is required of each; that is, in some cases what is needed to give them an understanding of a blue print, the ability to purchase material correctly or to inspect a department of the company. We want your advice, gentlemen, as to whether it is necessary for the public to undertake to control the education of boys and young men in order to assist the factories.

A Delegate: Are you trying out the part time scheme there at all?

A Delegate: Yes, we have about 600 part time boys in our trade school. Manufacturers are sending them for a half a day a week. In one of the trade schools, they are given one half a day a week, and are paid for their time. We report to the factory the progress the boy is making. We send a copy of his drawings, and of his corrected sheets in mathematics to the factory. We also have, I think, about 2,000 in night schools. That takes in workmen at the factories who want to improve their station. A great many of the factory people believe that if a man has sand enough to come down three or four nights a week to study some particular line of work, he should be encouraged and should be helped to advancement.

As I say, we have about 300 part time and 3,000 night students in our various schools.

A DELEGATE: May I inquire if there are any schools which take the place of the evening technical high school, or are you doing all of that?

A DELEGATE: The technical high schools are important in themselves; we do not go into it particularly for that purpose, but wherever a man wants analytical work we will give him any particular course he wants.

A DELEGATE: What I wanted to know was whether there were evening high schools in these cities where the evening trade schools are?

A DELEGATE: Yes, but they deal mostly with English and similar studies, and they are for the public in general.

A DELEGATE: I think there are a lot of men here who would like to get down to the specific apprenticeship problems that we were to discuss. We have said much about the public schools trade apprenticeship courses, what they are doing to aid apprenticeship systems, and now I think there are probably many difficult problems that come up in the shops and in the different manufacturing concerns that we would like to have straightened out. If we devote a little time to that I think we will be doing well.

A DELEGATE: This afternoon a question was asked to which, as far as I could see, no direct answer was given. The question was, "We have been talking a great deal about what we do in the schools and now what do we do in the shop?" We are here to talk. I can tell what we do in our company and I would like to ask a question.

In the first place we divide our work into three parts. We teach mathematics, shop problems and mechanical drawing. The part in which you are especially interested is that which we call shop problems and is undertaken by the superintendent of apprentices who spends his entire time in the shop with the boys. We have 47 boys divided as evenly as possible into four classes. Mr. Forsyth, who handles that portion of our work, spends his entire time, outside of the four hours per day per week which he spends in the school, circulating among the boys, giving them the best of his knowledge as to the proper way to run their machines. However, if Mr. Forsyth is not there the boy may ask of his foreman information as to the proper procedure, so that although our Superintendent of Apprentices handles perhaps a larger number of boys than your school might,—and as I believe, some of the others say that they do not want over six men to an instructor—for our particular purposes, we find the system works out admirably. And although it has been in operation only three years, when I went in to see the superintendent about getting some data relative to the men and their work, he said that he was perfectly satisfied. I won't put it as strong as that, that he was perfectly satisfied, but he said this, "the bosses haven't kicked."

I hope I am giving you all the information that perhaps you wanted.

The question I have in my mind here, is similar to the one I asked at Philadelphia, and not so very far from the one I asked at Dayton, but to which I have not yet found a satisfactory answer. I would like to have a vote by hands, if you please, as to how many are now teaching algebra beyond simple equations. (Raising of hands.)

That makes nine.

A Delegate: What do you mean, covering all the apprentices of all classes including draughtsmen, or all the boys in the trade, as the machinists, the moulders or the pattern makers?

A Delegate: I will limit that to machinists' apprentices, as those are the ones in which we are especially interested just now.

Will those of you who do not, raise your hands, please? (Raising of hands.) I count ten. I would like to ask of those who do go further, why they do, what application do they have, for instance, for quadratic equations other than perhaps in the solution of problems involving very rare questions?

A Delegate: I would like to answer that with a statement: We used in one of our classes an arithmetic by C. J. Palmer and I am not exactly sure what this book includes, I think quadratics. In the month of April, in our night school I had one teacher of mathematics who had twenty-eight boys. Their per centage of attendance was ninety-five per cent. of those who went to the night school in April. This would indicate that there is plenty of demand for quadratics. And why are we teaching Algebra? Because people are coming around and demanding it. There is unquestionably an application for it, for mining work, the development of mines. But that is not what we are concerned with in this section of the country; we want to teach that which goes into the daily work of men here.

A DELEGATE: What are men here going to use it in?

A DELEGATE: That is just the question I have in mind. There is certainly no application for it so far as I can see in such work as dividing a head and the figuring of the gears for the miller or similar machinery problems, but yet that seems to be, just at present, about as far as shop mathematics goes.

A DELEGATE: Mr. Chairman, we discussed that thing a little in the *American Machinist* last winter and we suggested that we would be glad to pay any of our readers for articles on the subject. As a result of this offer there were only one or two that wrote on the subject. Our idea was to have some one give us a specific use of Algebra, beyond its use in the machinists' formulas, and while we received one or two replies that indicated that the men had used it, we did not find any case in which the man could not have done his work as well without it.

I made this experiment at the instigation of the Commissioner of Education. He has been urging the teaching of Algebra in the public schools. He wanted that information if it was to be had and I did what I could to get it, but I did not obtain any results of value to him.

A DELEGATE: Did you not get any replies at all?

A DELEGATE: I received two replies from men who found a way in which certain problems could be done by the use of Algebra, but not any problems that could not be easily solved without the use of it.

A DELEGATE: Mr. ——— asked a question a short while ago that has not been answered yet, and that is, in a general way, whether or not a cash bond was required.

I had occasion to conduct an investigation a short time ago.

I took ten of the firms who were supposed to have laid out approved apprenticeship systems and I asked that question. No one of them answered that they were at the present time requiring a man to give a cash bond. I think seven out of the ten stated that they were offering a bonus for the successful completion of the apprenticeship.

A Delegate: Did that vary from $100 to $150?

A Delegate: It varied from $75 to $150 and from $100 to $150.

A Delegate: Mr. Chairman, I think perhaps I can contribute a little to that. We have been running an apprentice system for many years. Back in 1859 it was started and it has been developed as everything else has. Our school is quite highly specialized, and it is fitted to our needs irrespective of any other consideration. We have tried the bond arrangement, but it got us into all sorts of lawsuits and troubles that we had to be fighting about all the time. The trouble and the dispute and all the other expense was avoided when we stipulated in our agreement that every machinist apprentice who came with us must make a cash payment of fifty dollars. I understand that in some states there are state laws that prohibit this. These legal questions have to be taken into consideration whenever you are doing business. But we do not have any trouble on that score, and we enter into an agreement with the boy by which he is to pay us fifty dollars, or twenty-five dollars in some other trades like the moulder or some similar trade; but of the four years' apprenticeships, the machinists and the cotter makers, we exact fifty dollars. However, there is a cash bonus coming to the apprentice when he finishes his course of $150 under these circumstances.

A Delegate: The bonus is in reality $100, is that the idea?

A Delegate: That is what it amounts to if you figure it out that way, but that cash fee is fee simple, paid to us and there is no string attached to it whatever. Once paid, that ends our troubles in regard to it. We find it is quite essential in holding the boys.

But I might say that of the boys who go through that period of three months' trial before they reach the contract period under those conditions 70 per cent. finish.

And another point that has been raised here and variously discussed is in reference to those that stay with us. About 65 per cent. finish their time and remain with us.

We make a systematic business of making a physical record and report to the office before any boy's papers are endorsed. This is equivalent to giving him a diploma. We do not give a diploma at the present time, but the papers stating that the boy has served his time according to the above agreement are signed by the officers of the company. When these papers are brought into the office to be signed the record which shows the boy's progress throughout the term of his apprenticeship is attached. This record shows what he has done, both in class room and shop; and we keep a systematic record of each boy there just as you would in any school. At the conclusion of the period of apprenticeship the final rating of the work of each apprentice is placed on his record card. This record is filed in the superintendent's office and when looking for a young man to take some small but responsible position he turns first to the list of graduate apprentices for his first choice. We have had a number of instances where boys have been permitted to assume slight responsibility several months before the completion of their apprenticeships.

A systematic record of the apprentice's progress after graduation is kept in the superintendent's office, and if he successfully fills his first position he is entitled to a bigger one next time. The superintendent himself was formerly a company apprentice. Of course, it is not good business policy in itself to give a position to a man simply because he is a product of our own school. But I think that if there were two candidates for a position, one from our own school and the other not, all things being equal, the man trained in our own school would get a little the better consideration and would probably get the position. This forms one of the strongest links in our organization.

A DELEGATE: I would like to ask two questions if I may, I am rather a green hand at this particular line of work.

We are discussing just now the desirability of changing the apprentice system in our machine shop. At present the boys are scattered about the shop amongst a dozen or fifteen different foremen. Of these foremen there are perhaps three who seem to be especially qualified to handle the boys, to take somewhat of an interest in them, and who appear to be accomplishing results with them. The rest of them are good foremen, perhaps they are even better in some ways than the three mentioned, but they do not take the same interest, and do not accomplish the same result. To them these boys are more or less of a bore.

Now the question is: Would it be wiser for us to appoint one foreman, to give him an equipment of varied machines, which is somewhat contrary to the practice in the shop, and to turn all the boys over to him for such a length of time as is necessary for them to obtain some pretty definite ideas as to the handling of the different machines?

The other question that I would like to put up to this organization is this: How about paying these boys piece work rates?

I have two boys who have been in the shop a little less than a year. We have a contract for some Ford starters and very often many of those things that come in are done by these boys at piece work rates. In this way they are making anywhere from thirty-five to forty cents an hour. What will the effect upon these boys be when we have to put them to work on some other kind of work, a knowledge of which is fully as essential, where we cannot give them as good as piece work rates? What is going to be the effect? Are we safe in doing it? Is it a good thing for us to give them that special work and thus to let them see that there is some money in the machinists' trade if they can only get into it? We can get speed out of them all right. But I do not like to establish a practice that is going to be detrimental to the boys.

A DELEGATE: I think I can answer the gentleman's question fairly well as we have been through exactly the same situation.

Some dozen years ago the same condition that he has described existed in our company. We had something like forty-two apprentice boys. It was only once in a while that we found a foreman who was an instructor, but most of them took the attitude that they had their work to get out and the boy was a bother. Especially if he was a bright boy, for he was always putting benzine in somebody's chair or playing some equally harmless trick. Of course the foreman felt that such tricks were not getting out his work. And so, after carrying through all forms of apprenticeship since 1868, we were finally forced to this opinion:

That you cannot get modern apprenticeship in a shop with regular foremen. Then we started out to buy machinery and fit up a special training work room. At that time it took us from nine to eleven months to get the machinery. It was discouraging and for a year the number of boys went down. Then we went around the shop, picked a machine here and a machine there, bought a few more and put them into a room just as far away from the journeymen as possible. We selected one of our best foremen, who was fond of boys, and we corralled all the boys and put them in this room under the direction of the foreman. There were four-year boys and three-months boys all together; and it would be a surprise perhaps for you to learn that the four-year boy could not do what our boys do now in four months. We found that this plan worked so well that we outgrew the first room, and had to take another room above it. We thought this was not the best plan since we wanted all the boys together, but the conditions of our factory were such that we were obliged to do this. We bought more machinery and fitted up a room about the size of the one below, which is about 60 feet square. Then we divided the boys up, and left all the beginners, those that had been down there eighteen months or less in the original room. Over eighteen months to three years we put in the room above. The boys wanted to be graded just exactly as you grade in a school, and I will tell you why: In the first place if you have a very bright boy you will give him, under these conditions, all the outside work that comes along. That boy gets along very nicely and the first thing you know when you want a particular job and you want it quickly you will give it to him even though it is work that he ought not to have for another year. However, he is given the work and does it. The instructor cannot keep track of every bit of work which is done because of the variety of jobs that the different boys are doing at the different stages of their apprenticeship; and he cannot remember what the boy has had without continually looking at the records. Sometimes he wants the sort of job done that the boy should have done in the second month and the boy has been there about four months, so he becomes disgusted because he did that kind of work two or three weeks ago. He feels that he is being put back several months, but the grading cuts out a great deal of this.

In the fourth year we put the boys in with the journeymen and they work elbow to elbow with the journeymen under the regular shop foremen during the entire last year.

As to your second question regarding piece work we have had experience along this line, too. We had, some years ago, a case of a boy who was very bright and we thought it would be a good thing to encourage him by speeding him up. As to the speed proposition, this takes effect from the second day after his entrance in the course because we keep a speed record of every job that the boy does. If that job comes up again, it is put on the same card, and a comparison is made with the record made at the previous time, also with the record of other boys. I have found that this is the only way to do, to keep an exact record for the reason that if you ask a foreman whether a boy is quick or not, he is apt to judge by the alertness with which he jumps around the room. I have a number of times inquired about boys who have been in the fourth year in the shop and received some such answer as, "Well, he is all right, he is pretty good, only he is slow." He is one of those fellows that goes all day long on the same gait and for this reason they think he is slow, but if the card system were used in that shop for the fourth year as well as the first three years they would find that he was one of the fastest boys there since his record for the three years previous gave that report. I do not believe that a boy's speed will decrease in the fourth year when he has been going at that gait for three years. From frequent observation we note that there is a personal element in it.

From the piece work proposition we found that the boy was "tickled to death" to get the piece work proposition if he could make even three cents an hour more, and the result was that he became a good deal like some older people, money-crazy; and just as soon as that job was finished and if he is put back onto day work again, you will find that you have simply spoiled a good boy for life. The proposition has summed itself up to this. Some gentleman here will probably ask what it is proper to pay an apprentice. My answer to that would be, give him just enough in the beginning to buy bread and butter and a cover for his head. Any more than that is a detriment to him. Increase his pay periodically. We increase every six months, and at the expiration of his time give him a bonus that he will feel is enough to put it away as a start for a bank account. If you follow this plan you will teach him his first financial lesson and you will find that he will continue to save for himself. If he saves for himself he will certainly save for any company for which he works. There are exceptions, of course.

Now as to the rate of pay. That depends, I think, altogether upon the locality, for in some places you can live cheaper than in others. I have talked with a great many who have paid as high as fifteen cents an hour when the boy first enters the apprentice course. They claim that in paying that rate they get a better class of boys. In talking with these same people I find that they lose a large percentage of boys through desertion. In paying such high prices they are simply fooling themselves as well as the boys. They claim they are giving an apprenticeship, when in reality they are just using the boys as a commercial proposition since they are getting work done for fifteen cents an hour for which they would have to pay others from twenty-five to thirty-five cents an hour. What is the result? The boys become dissatisfied. They know that they are not getting enough. They know, too, they are not getting a trade, and, as a result, they desert.

We pay eight cents an hour to start with, what I consider too low a rate. We wind up at twenty cents. We pay the boy one hundred dollars bonus at the completion of his time. To show you that it is not money that keeps the boys, we have not lost a single boy in a year and a half, and we have worked them on short time because of the depression in business. We have only lost five boys in eight years by desertion. There is a lot that can be said for and against, and I would be glad to hear some more along these lines.

THE CHAIRMAN: Mr. ——— of the National Cash Register Company wants to show a few slides.

A DELEGATE: Mr. Chairman and gentlemen. It is a great thing to witness the beginning of a new proposition, one that is really a good proposition. That is really what has happened in ———, for two years ago an attempt was made to prove a new idea in ———, and we have been watching the results of other people's experiments as well as of our own. We are studying this question just like the rest of you and we are trying to meet the situation in a very modest kind of way.

The last convention of this Association was a very remarkable convention to a number of our boys. I think they learned a great deal about co-operation. Of course we are handy to Dean Schneider, and we sit at his feet very frequently, taking our inspiration from his, as all of you must have originally, and he is the father of this movement. The idea of the co-operation of various lines of businesses does not amount to anything unless some absolutely active step is taken, and unless it is under some one general control.

We found out at the last convention how to spell co-operation, and I think it has stayed with us for a long, long time.

As a consequence we thought we ought to do something different for our apprentices. We have had apprentices for about twenty-five years and it is nothing but a bread and butter proposition, and only a little bit of bread and a little bit of butter. We have trained them with very little system and with very little of their work planned out in detail. It seemed to us that we were not accomplishing the result that we ought to accomplish. So we tried to impress this idea of co-operation upon everyone concerned and it went home. Somebody made the statement here last year that only a very small percentage, I think it was something less than twenty per cent. of the employes of the company, is in concerns which are large enough to support a corporation school, and for the sake of the others, the smaller concerns in your cities that go to make up your industrial life, it was felt that it was right and proper to co-operate with the public schools. We know we can do the work better in our own concerns, we are positive of that, but we are getting some very good results in the public schools with which we are co-operating. We find the superintendent very willing to take the men we recommend. We thought he would not do it; we did not think he was progressive enough, but he took up our proposition and said that he had been trying to get us to adopt this plan for three years. We feel that in the past we have not given proper attention to local conditions. Dean Schneider's plan emphasizes this. Our boys work one week in the shop and one week in the school. We take boys at sixteen, since we think we should begin our teaching at that age, although there are others who think that the age of eighteen is early enough. We feel we ought to have our boys a little bit earlier, on the other hand, and we are keeping quite a number of the boys in the school awaiting proper opportunity, in the co-operative school. Although last year was our first year we have the course completely planned. The boys must have two years of high school work. After that they are taken down to the shop for a trial period, and after we have passed them through this probationary period we consider that they are entitled to the four years' course, consisting of one week in school and one week in the shop. The school year consists of 26 weeks and the shop year 24,—making 50 weeks in all.

A Delegate: Is that morning and afternoon?

The same Delegate: Morning and afternoon, seven hours a day and five days in the week.

A Delegate: I am glad to see somebody else is starting that; it is bound to come up some time.

A Delegate: On the sixth day, Saturday, we have all our boys co-operating. They all come out to the factory and spend their time there from eight o'clock to 11:30 at the factory. On this day we try to co-ordinate the work in the school with the work in the shop.

At the end of two years when the boy is 18 years old he will get full credit for the work he has done and he will be graduated from the high school. At the same time he is credited with two years of the apprenticeship work.

At the end of two years, or at the age of 18 years, the boy has completed his high school work and at the same time has gained two years in the apprenticeship work. We give him then the opportunity to take either two more years of continuation school work, that is advanced work, two half days per week on company pay, or to go to enter the University of Cincinnati and take the engineering course.

A Delegate: How many boys have you just now?

A Delegate: We started this year with something like forty; we expect to have 160 when we get fully established and in operation. It may be more than that.

A Delegate: Do you send your boys to school or take the school boys into the factory for this co-operation?

A Delegate: Both.

A Delegate: You take high school boys into the factory?

A Delegate: Yes; the expectation is to send these boys to the company factory now, and we are selecting a course for the apprentices in the factory which is pretty thorough.

A Delegate: How about machinists' work?

A Delegate: Yes, and also the metal trades. At the present time we are going to start 50 boys in the typographical work, and in a short while we will have some working on electrical work. We had 52 in the school the first year, and now we find there are going to be 150 more the second year. We have had a continuation school plan of 107 going on for three years. It is only a start, and just now we are feeling our way. We are anxious for criticism. We are looking for suggestions. Here is an opportunity for the poor boy. He can start at sixteen, get half pay at work and at school for two years, and full pay if he starts in his trade. Following the plan outlined the boy can take the course from the time he is sixteen to twenty-three, and pay his way from the two years of his apprenticeship work, through the university course. This is a great opportunity for the poor boy to get an education, to go to school from 16 to 23 years and finish up with a university degree.

A Delegate: Do these boys work right in the regular shop?

A Delegate: Regular shop, we have no separate shop for them; no separate shop school.

A Delegate: Your term is four years?

A Delegate: Four years. We are hoping that the intelligence of the boys may shorten this period. We are not making it a definite period.

A Delegate: You mean at the same time that they can stay as many as four years in the course, is that the idea?

A Delegate: They are entitled to four years. In the shop course they spend two months in the manufacturing or tool supply department; two months in the production work on hand and power milling machines and gear cutters; two months on the tapping machines, spindle and gang drill presses, and two months on the surface and universal grinders. This works out practically four months for work on milling machine, lathes and so forth.

We have now gone over it so thoroughly that we have a definite plan for a four-years' course in the shop. If the boys do not want to go at once into the shop to work, they can go to the university if they so desire; we make them that offer and they can accept it if they so desire.

A Delegate: Do you guarantee a diploma?

A Delegate: We hope some of them will become salesmen and fit into our organization in different ways. Probably all of them will not, but they are studying and working toward an engineering degree. We expect to watch them very carefully and at the end of a six-months' period we try to get them into the things for which they are best suited.

This is simply an outline and I am glad to have had your close attention. I am glad to have been at your meetings here and to show you that we are working towards a definite goal. We have a long way to go yet.

May I ask if there are any manufacturers here who have had experience in co-operative training of high school and college graduates?

A DELEGATE: I have had some experience with University students.

A DELEGATE: Here is another gentleman here. What was it you were about to say?

A DELEGATE: The National Cloak and Suit Company of New York has had considerable experience of that kind. Beginning about the first of February, we had fifteen girls from one high school come in our establishment. Later on, we had fifteen girls come from another high school, so we have thirty girls in that plant alternating a week in school and a week in our company. Of course this is clerical work entirely. We have just been debating this proposition and at present we are investigating to see how these girls stand in comparison with the ordinary girls. We compare their work, compare them with a group of regular employes. At the same time we compare their output with that of the rest of the office force and, as a rule, we find that their output is greater than that of the regular employe of the company who came in at the same time, but less than that of the office as a whole. They had an advantage in certain other ways and are more amenable to discipline, easier to deal with. It is something entirely new and we are simply experimenting with it at present.

A DELEGATE: I would like to answer that question too. We found one great difficulty with the co-operative school plan. We had about thirty apprentices who were alternating weekly between the shop and a trade school or industrial school for five days a week. That meant that fifteen were in the shop five days and fifteen in the school but on the sixth day the full quota of thirty were to be in the shop. We did that for a year very successfully until the corporation which controlled this company sent an efficiency engineer down to look the proposition over and one Saturday when he went into the shop he saw the thirty boys there, fifteen of them probably not doing anything, so he began to investigate the system. The consequences are that the school now operates on a six-day basis and anyone taking up this system of co-operative schools will get up against that same proposition. There are several such difficulties and we have found that the trade schools have been only too willing to co-operate with industry in remedying as far as they can any such condition that may exist. I know they did it in our case. In one case where a three-years' course in a co-operative school had been planned we found that the three-years' term was more than enough to fulfill the requirements of our trade, so the school cut its term down to two years.

A Delegate: Mr. Chairman, my question had to do with the finished product of such a school. Is there any other one of the manufacturers here who has had any experience with the finished production, the graduate of any co-operative high school or college? I do not think that the scheme has been in practice long enough in New England for us to judge accurately of the finished product.

A Delegate: I might say that I am connected with the same institution as Mr. ————. In our investigation as an Educational Committee, that point came to mind, and we were successful in finding some co-operative school graduates in Pittsburgh, who worked very well. We were further successful in finding co-operative university graduates in our own city, and in Cincinnati and other cities, who proved very successful, we might say prominently successful. Most of the young men were graduated from the co-operative courses of the university and were in positions of supervision, some were managers, some were superintendents and some probably not quite that high; but they seemed to be as a class very successful.

A Delegate: In connection with that, I might say that I am trying an experiment this year. The young men have their regular training first in the lathe room, then in the different departments of the factory, and also in one shop of the Rhode Island Tool Company. The young apprentices and the graduates of these co-operative courses are being tried out together in the making of automatic nut tapping machines. These graduates have had practically full charge of the manufacture of those machines and with the help of my apprentice boys they have done excellent work. In that particular shop I think these trained graduates are going up the ladder gradually.

A DELEGATE: I would like to ask a question. I would like to ask the gentleman right here what amount he considers will do, will give the boys what he said he thought they ought to have, that is, what will supply them with bread and butter, and a place to sleep and so forth. We have been going through a transitionary stage, not only in the matter of wages but also in the method of instruction.

Up to this time our apprentices, from seventeen to twenty years of age, who are going to be tool makers and instrument makers have been started in the shop with the shop foremen. We have felt that this was not entirely successful because the shop foreman, being under continual pressure to get his work out in a certain time, would leave the apprentice to slide if he did not have time to give him the necessary instruction. In other words, he would go to work without the proper instructions. Now we have established a shop which has a capacity of forty-five students, and in that shop we plan to have three shop instructors—one for every fifteen boys.

That shop is divided into certain groupings, and when the company came to the conclusion that it was going to do this, it went outside and engaged a manual training teacher. We have decided to give our boys certain fundamental instruction on certain machine operations, first. After we have given them this instruction they will be sent out to the tool machine department, turned over to the foreman, and they will work elbow to elbow with the journeymen. They will remain there for six months, working on things that take in the knowledge which was given them before they went there. Then they will come back to this shop again to take the next step in the game. In other words, we have analyzed this thing and put it into steps, you might say. We are attempting to solve the problem this way and whether we will do it or not remains to be seen. We plan to give them three years' training in this way but whether it will work out or not I do not know.

We put our boys under indenture for four years, and it is understood that the first year is a trial period. In that time, if we become convinced that they have not the ability to become mechanics, we tell them so, pointing out why they are not fitted for it. We try to be perfectly square with them.

We give our boys fifteen cents an hour. We did pay nine, but we could not get boys. I don't know how it is with others of you but we cannot get tool makers. We have four hundred and fifty in our tool making department now, and although we have work for two hundred more, we cannot pick them up anywhere. The assistant superintendents to whom I report have said, "Do anything you want to do, but get some tool makers."

We pay fifteen cents at the start, sixteen cents at the end of six months, eighteen cents after another six months and twenty cents in the next six months. That accounts for the first two years. Then the third year we pay twenty-three cents and the fourth year twenty-eight cents. Then we give them $100 bonus and this makes about $2,300 for four years of work. I wonder if that is too much? I haven't had a chance to find out yet, but we are going at things systematically. In other words, we have to prove everything we do.

The superintendent of overhead charges has figured out that these boys can pay their own expenses out of this amount. The company does not care for anything else; that is enough. The company figures that the boys will become good workmen and will so be repaid for all their trouble.

I would like to know if that is too much money for those boys. I don't feel that it is. We have been using about forty or forty-five apprentices and we are going to increase that up to a hundred and five or a hundred and ten. We hope to graduate from twenty to twenty-five every year, for we need that many to take care of our own work.

Another thing we expect to do is to permit machinists trained out in the shops to come and finish up on this course doing our work on the bonus plan and we will make of them die makers and tool makers and other things.

I would be interested to know what you think of this, because these things are live things to me.

A DELEGATE: I am only too pleased to answer your question as to whether you are paying them too much, although I think you have answered it yourself. What is a man worth when he first comes out of college?

A DELEGATE: I was fortunate enough to pick up $3 a day when I got out. I don't know whether I was worth it or not.

A DELEGATE: I have never seen many boys the first week out of college that could earn fifteen cents an hour. They got it to be sure. That is not the question, that is nothing against the cub. What is the cub? He is only a foundation to be built upon.

Now the question is, what is in the man? How much natural ability has he in the line which he is trying to pursue? To answer that question is to answer the question of the round peg in the square hole. The large majority of them that are coming out of college are trying to fit square pegs into round holes. I am getting off his question, but I wish to follow this out a little. There, to my mind, is just the trouble with the colleges. This world is full of misfits, and it is not because men are not bright. They have brains, and they can be successful provided they are put into the right places, but that is where we must come back not only to our colleges but to our commercial schools.

The other day a young man came to me and said that he wished to be a draughtsman. "What do you know about drafting?" I asked. "Oh," he said, "I think I know a little about it. It is making lines." "Well," I said, "do you ever dream with your eyes open? Have you any imagination?" He answered "No," and when I asked who told him he wanted to be a draughtsman, he said that his teacher had told him that he would do well at it.

Now in the first place that teacher was to blame because I doubt very much whether she knows what drafting is herself. She thinks that drafting is art work, as do a good many that come out of college.

But coming back again to the fifteen cents an hour, I would qualify the statement that this is the proper amount to pay by saying that it makes a difference, with the locality. The gentleman who spoke stated that it was hard to get boys at nine cents, but I can tell him that he will have trouble not only at nine cents and even more at fifteen. You can get boys at any price, if you work your school right, and you can get them for nothing if you want them. You must get a reputation for your school, and the boys will fall all over themselves to go to it. It is not a question of money, it is a question of school.

A Delegate: I am going to say a few words about our apprentices. We have nine hundred of them scattered over twelve states, with our twelve thousand miles of road traversed by our trains. We educate the boys in sixteen different regular apprentice schools, with three or more instructors in each school. We have twelve shop instructors in all, and sometimes two or three school inspectors in the large shops. Up to the last of June we had graduated about 730 boys. About 74 per cent. of them are still in the service and they are good journeymen.

When a graduate is established in our shops he feels secure for the future since it is a rule of the company not to fill higher positions with outside men, but to promote our own men. So when a boy has passed through our apprentice schools and has passed the examination he knows that if he continues to work faithfully his career has only just begun. He knows that some day he may be foreman and that he can rise as the opportunities offer; that no one on the outside is going to be brought in to take the possible position which is awaiting him. That makes in itself an assured future for our boys and so we can get all the boys we want. We get more than we can use.

The success of our apprentice system is due to the shop inspection. We put the boy in the shop as soon as we get him. We do not put him outside of the shop in a place by himself, but place him in the shop in the hands of the shop instructor. He attends the apprentice school four hours a week on two different days, and is taught such subjects as he actually needs in his work in the shop. He is taught the things that apply directly to what he is doing. He is responsible to the shop instructor for what work he does. And we hold the instructor absolutely responsible for the training of the apprentices. He is with the boys every day, every hour, and we do not excuse any shortcomings in any of the apprentices under him. It is his duty to cull out the undesirable boys before they get too far into the apprenticeship. We have refused to graduate a boy on the last day of the course. I saw a situation like that recently where two boys after they had completed the work were refused diplomas because in the last six months of their apprenticeships they laid down on it and so made for themselves bad names. We held the instructor responsible for that. The shop work and the school instruction must go hand in hand. Shop work minus school instruction is a failure.

The work is laid out for our special apprentices by the shop instructor. He maps out the entire course with reference to the amount of shop work and theory which he is expected to cover. He reports to the general foreman each month and shows just what progress the boys are making. If the work is not up to the schedule an explanation is due.

I want to say this as to your opportunities down here: We have the best of material to draw from, and I wish it were possible for us to have the benefit of some good trade school like yours.

We thoroughly believe in the proposition, that where it is at all possible the apprentice should work in the shop exactly as a journeyman; the only difference being that we cannot put the apprentice on short time work. The shop may close down but the boy must be kept there and at work, for we have obligated ourselves to furnish him with work and teach him a trade. We have iron-clad rules governing us, that no one in the shop has a right to change unless by approval of the president, the vice-president and the board of directors.

A DELEGATE: There has not been very much said to you to-day about these city trade schools. I have been rather looking for the head of the Boys' Trade School here to give us some idea of what is going on beyond what we were able to see this afternoon, and as a former head of it perhaps it might be appropriate if I said just a word or two.

You know sometimes it is said that chickens come home to roost. One man asked a few minutes ago which I was, a shop man or a school man. I said, "I certainly am." (Laughter.) When he wanted to know what I meant by that, I told him that I qualified on both, having spent almost fifty per cent. of my life on each side of the fence. I want to say this, and I think it would apply in the case of almost any technical school and almost any trade school: The boy who comes from the trade school into the commercial shop must be handled with a little bit of patience. The graduate of a school is not necessarily just fitted to your needs. You must remember that he has been trained to the best of the ability of those who have been handling him to enter a large variety of different subjects and so he may not have been trained for any one specific shop, any one specific business or any one apprenticeship or engineering work. He must be given a little time. I think a showing of hands by many of the men present indicating where they came from themselves showed something of that sort, but I think if we all of us looked back in our own time we would say that perhaps we got all that we were worth when we first got out of college. And yet we very soon did fall on our feet.

I don't know how the gentleman who was paid $3.00 a day worked it, but I know that he fared much better than I did when I got out of school. The first year I got ten cents an hour. Ten cents then was a great deal more than 10 cents now.

At the time when we started the Co-operative School in conjunction with the different manufacturers here in this city, the Board of Trustees of this school gave me full and ample warning that if we instituted any half time proposition, or any continuation school proposition, all our boys would rush out immediately into that, since they would in that way get wages. Somebody has said here that if you have not the slightest difficulty in getting all of the boys that you wanted, that you could get them for nothing. You cannot get them to work for nothing, and you cannot get them to work for nearly nothing, but you can get them to work for half of what they are worth, provided you inspire them with the idea that the future is bright for them.

Now some of the boys have gone out from here on a half-time plan. There was not that mad rush to get into the half-time plan that was predicted. And to illustrate that, the largest number of half-time boys that we had here was four and one-half pairs. The shops were so anxious to take the boys on that plan that they were willing to take up the scheme by letting them have every opportunity to come. The shop gave them every opportunity and we gave them every opportunity, but despite this fact this is the largest number that we could get to undertake the plan here at any one time. There are nine boys who come to this school from the different shops about here each Saturday morning to get some extra information and instruction on the special work in which they are engaged. As a result they get the promotions, and this moves every one of the men in the shops where they are working. After they have taken this half-time course and are graduated from this department, it is not absolutely fair to compare their work with those that have been working steadily in the shop in the meantime, but I will say this, that there is certainly a greater amount of advance for those that take these special instructions than for those that depend upon the information that they gain from the shop alone. None of these boys have gone over their half-time schedule in this school. There have been boys that have gone two and a half or three years, and then through some misfortune they have to give up school and go into the shop for good. Such circumstances take from us some very promising boys before they have completed their work. We have really only begun, as you might say, in getting these boys and men from the shops and keeping them with us a longer time, but I feel that the influence from this school will be appreciated in time among the shops about this city and the school will be used more and more.

Now these boys who come to us from this school have proved the worth of their training here.

There is another serious question that has been mentioned, and that is the question of speed while the boy is in training. I do not believe that it is a frequent experience for the boys to lose in speed by learning their ground work thoroughly and slowly. My feeling is that the only safe way to work a man in on a machine and have him understand the machine and do his work correctly is to begin with him slowly and see that what he does he does rightly. When he is under the strain of competition, he will get the speed all right if he knows how to do the work.

A DELEGATE: If a motion is in order to adjourn, I make it, and all those who would like another little session can take this up further later.

THE CHAIRMAN: As the hour is getting late, gentlemen, it is after ten o'clock now, I think we ought to postpone any further business, and if possible meet to-morrow after the session on Public Education, which is to be held at nine o'clock a. m. I think we could arrange to have a meeting somewhere in the hotel. Perhaps take a corner of the ball room, if you wish to continue it.

I think the discussion to-night has been very interesting and instructive, and we have tried to stick to the subject. It is a pretty hard thing to do, because there are a good many subjects which are interwoven with the apprenticeship, and we could talk a long while on everything that has been brought up to-night and it would still prove interesting from both educators' and shopmen's standpoint.

COMMITTEE ON
SPECIAL APPRENTICESHIP SCHOOLS

Mr. FRED R. JENKINS, *Chairman*
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72 West Adams Street, Chicago, Ill.

Mr. J. W. DIETZ
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TUESDAY—AFTERNOON SESSION

Note: This report was written by Mr. Tipper of the Committee

SPECIAL APPRENTICESHIP SCHOOLS

TUESDAY AFTERNOON, JUNE 8, 1915,

VICE-PRESIDENT JOHN McLEOD, Presiding.

THE CHAIRMAN: Mr. Jenkins, we have learned, will not be here this afternoon, so the report of the Committee on Special Apprenticeship Schools will be delivered by Mr. Harry Tipper, of the Texas Company.

MR. HARRY TIPPER, of the Texas Company: Mr. Chairman and ladies and gentlemen, Some explanation is necessary as to the way in which this report was gotten out, not primarily because of the necessity of excusing the report, although that requires plenty of excusing, but because of the inadequacy of the report, an inadequacy which might not otherwise be thoroughly understood. Some two or three weeks ago after the questionaire material had come in and gone out and most of the committees had reported, Mr. Henderschott informed us at the conference that the committee on this subject had not been able to report. As I was the nearest victim he asked me if I would make a report for the committee. I do not know why I was picked out otherwise because I have no special knowledge of the subject. The information which was secured from the questionaire was not such as would make it possible to complete a thorough report upon this subject. The only thing which gave me a real clue to the matter was a letter of Dr. Steinmetz' outlining his ideas upon the subject.

Dr. Steinmetz had written an outline similar to that mentioned in his address this morning upon the necessities which had arisen for new trade work by the extension of industry into unknown fields and the use of the forces which had only been discovered or made useful within the last twenty-five or thirty years. In that time there has been a tremendous growth of industry into new fields—either the taking of old principles and applying them in new ways, or discovering new materials, or taking previously waste materials and, by new processes, manufacturing them into useful products. There are therefore some conditions of industry which require education outside of the education covered by the regular designated trade schools.

The trade school in connection with public education and a large part of the work of the school of the corporations deals with those trades which have been defined and understood by regular terms and which have not, necessarily, covered special conditions. The special conditions may be covered by a mere extension of the same principles which are applied to the old trade education. In other words, the special conditions may merely be an extension in a process, but not a difference in the actual conditions, so that the extension of the trade education along the same lines would cover it. Then there may be the variation which is due to a new application of an old principle. This means a new practice, but not necessarily a new theory, and then there may be an entirely new principle which would mean a new theory as well as a new practice, and would consequently mean an entirely new development. Now upon those points it was impossible for the committee to get any statement or to do any research work. I had not in my hands at the time I dictated the report anything in the nature of answers to the questionaire which would lead to a knowledge of the special divisions which were not under the designated trade terms; the character of those special divisions, and whether they meant merely new operations, new practice or new principle new theory and practice, so it was impossible to go any further than to make a suggestion upon which the new committee might base its investigations.

I have nothing else in the line of suggestions to make because I did not get any very up-to-date data on the subject. Such data must be obtained by further research. Until we can get that data, co-ordinate it, weed out of it what is required from the new standards, what can be covered under the regular work that we are doing now with the public and trade schools, and what should be added, we cannot go very far on any suggestions. (Applause.)

REPORT OF SPECIAL APPRENTICESHIP SCHOOLS COMMITTEE

The reason for the term "Special Apprenticeship Schools" is contained in the growth of new industries which are divided into departments of subdivisions of work lying a little outside of those designated by the regular trade nomenclature. The growth of new industries in the last twenty to thirty years has been very important, both on account of the number of people employed therein and on account of specialized subdivisions which have been created in these new industrial ventures.

The regular apprenticeship school looking to the education of employes in the well defined trades covered by the ordinary trade divisions is not calculated to meet the requirements of these special divisions either as regards the details of the course, the length of the course or the syllabi and the textbooks to be used.

The definite object of the trade apprenticeship school, whether it is conducted by the regular educational authorities under vocational training or conducted by the corporation, is aimed, I take it, to provide for the young employe general knowledge of his trade which underhand labor conditions he acquired in the ordinary course of working at it, but which due to its subdivided occupations today must be acquired by special training.

The carpenter, the printer, or the shoemaker in the earlier days of industry learned all the operations required in his trade and consequently had a more intelligent view of its importance and the conditions covering it. Today the carpenter may do nothing but fit together things which have been made by a multitude of other workers, each engaged upon one of the numerous operations necessary to its completion. The education of all these workers would be sufficiently developed for the purposes of industry if they covered the general field of woodworking included under the old trade designation of carpentry.

The whole of the electrical industry, however, for instance, is of recent origin, and while it engages many workers whose work can be designated under the defined trade terms, it includes also a multitude of workers whose tasks are sufficiently new to have escaped that definition and to require educational efforts lying outside the general understanding of the work "Trade Apprenticeship."

It is the consideration of the necessities of this class of workers in respect of education which the president had in mind in appointing a committee to treat with the subject of "Special Apprenticeship Schools," and it is obvious that this part of the educational requirement in the corporation today is growing continually with the use of new materials and new methods of manufacturing those materials into finished products.

Unfortunately, this is a subject upon which practically no records have been collected in sufficient quantity to make it possible to correlate them in any way and draw any general conclusions or any suggestions of value as to their working methods, textbooks, length of course, or other conditions. The work of this committee, therefore, must be confined to a brief and necessarily inconclusive survey of the field with a few suggestions as to what should form the basis of the work of future committees in gathering together and considering information and necessities in such cases.

It is evident that some of the trade schools which are conducted by members of this organization, as determined by the general questionaire sent out to all members, covered also some special trade apprenticeship schools mentioned, although none of the questions which were asked brought out particularly the importance of the special features in such cases.

It is not possible for this committee, therefore, to refer to the questionaire, as practically all the information would undoubtedly be covered by the Trade Apprenticeship Schools Committee, and this report must be considered in combination with that report as far as this questionaire is concerned. It seems obvious that in the consideration of special trade education lying outside the regular definitions usually applied, little or nothing could be done in the way of correlating or comparing results until some determination is made as to the relative importance of such trades and the way in which they ramify through a number of industries or corporations. In other words, if a special trade affects only one or two corporations, or a small and unimportant industrial division, the information secured or the education required for such special trade would hardly be a subject for general consideration of this body at the present time, and could properly be left to the corporation at interest with such suggestion as the general trade school situation would be able to supply.

The education for these special trade divisions will unquestionably be affected very considerably by the character of the special features involved in their consideration. Where they are concerned only with new application of principles already applied under the defined trade terms, the general structure of the ordinary trade apprenticeship school could probably be broadened sufficiently to take care of these requirements; inasmuch as no new principles would be necessary in the foundation work, and the additional application of such principles, both in the manual and theoretical work would properly and directly branch out from the structure as it stands.

In a great many industries, however, the developments of such industries have depended largely upon the discovery of new production or trade principles altogether, so that not only are the subdivisions of such industries new, but the whole industrial venture is part of the new aspect from a scientific, production and distribution standpoint. In such cases the general development of the work in ordinary trade apprenticeship schools can do not more than suggest ways and means, suggest methods by which the new principles and the new application, both practical and theoretical, can be learned.

In such cases, however, the syllabi, the length of courses, the character of the lessons, the division between practical and theoretical training, and all the details of the new special education must necessarily be worked out for each particular subdivision, because of the fact that practically no attempt has been made up to the present to treat such new trades or operating requirements from an educational standpoint, and there are consequently no such well-defined ideas of their limitations, their scope or the extent to which they can be taught.

This committee, therefore, would suggest to this Conference that the first thing to be done in connection with the working out of educational possibilities for special apprenticeship schools, is to determine the general developments and importance of the various items along these lines, by making investigations through the members of this body and outside wherever circumstances will permit, which investigations take into account the following items in the details suggested, and from the information received, as a foundation, prepare a general but very short report to go out to each member of this body with a request for comment, criticism and suggestion upon specific items; and after considering that report, make recommendations to the executive committee of this association for such further action as seems desirable at that time.

The suggestions of this committee are as follows:

One—That each industry, such as the electrical industry, be taken up separately, a determination made as to those operations which can be classified under the ordinary trade terms, and those operations which have arisen out of the new conditions and cannot be so classified that the importance of each such operating subdivision be determined as to the number of workers and the number of establishments in which it is required; and that this information be used as the basis upon which to determine those subdivisions of a new character which from their importance and operating requirements should receive the first and the most serious attention of this body.

Two—That in the case of each subdivision considered of a new character, an investigation be made into the extent to which such subdivision occurs, and the application of new principles, a wider operating application of old principles, or simply a new subdivision of older operating conditions so that some determination can be made as to whether the special features involved are methods of practice only due to the growth of the industry, or methods of practice engendered by new theories or scientific knowledge in respect of the industry, or whether they are new industries due entirely to new commercial applications of laboratory discoveries.

Three—And in correlation with the first two items, to determine from the previous investigations the importance and character of these subdivisions and the extent of their special features. The general and detailed methods, points of theory and practice in connection with trade apprenticeship schools already firmly established under conditions more or less effectively known, can be transferred or applied to the requirements of these new special trade apprenticeship schools. Moreover, they would be valuable in determining the structure of such schools even where they themselves cannot be used. And finally, *Four*—That the modifications which could be made in the public education of a manual or vocational character in order better to fit such education to the newer principles and applications of principles which have been determined and grown into industries in the last few years, so that whatever influence this body can extend in the direction of bettering the public education can be wisely so extended after thorough investigation and consideration to the end that any suggestions, statements or reports upon such an important subject from this body, representing as it does large business interests, shall be thorough in its investigations and conservative in its suggestions, in order that no statement which it has to make in regard to the modification of public education can be construed as encouraging the tendency to fads which has unfortunately been apt to display itself.

The report of this committee is necessarily suggestive rather than conclusive in any measure. It is questionable whether the new committee would in the course of one year be able to secure sufficient material to make a report which would answer with reasonable thoroughness all the questions suggested in this report. Whether it takes one year or several years is unimportant. It seems to us that nothing can be done in the way of making suggestions as to ways and means which would be valuable until the information from some such questions as those which preceded can be secured in considerable volume.

THE CHAIRMAN: You have heard the report of the Committee by Mr. Tipper. The first gentleman on the list under the head of discussions is Mr. S. W. Ashe of the General Electric Company.

MR. S. W. ASHE (General Electric Company): I had the privilege of having lunch today with our worthy friends Mr. Bardwell and Dr. Steinmetz, and I was a little curious to know just what the Doctor had in mind in appointing this committee on special apprentice schools. I had formed a few definite opinions in the matter and I was rather glad to have the Doctor corroborate my ideas. What I had in mind was the fact that there are certain apprentice courses which are pretty well organized at the present day. The chief courses we have been discussing this afternoon are what is known as the regular apprenticeship courses. We hoped, in addition to that, that two particular types of institution would come under discussion. One, that form of apprentice school as carried on by large organizations, such as the General Electric Company, the Westinghouse Electric and Manufacturing Company, the Western Electric Company and other similar companies, where college men are trained after graduation. The other type of school is more diversified, such as some form of general evening educational work of a rather indefinite nature which will form a nucleus for organizing, ultimately, some form of standard course. I shall say only a few words about the first type, and more about the second type.

The object of a large company, as I understand it, in organizing a special apprentice school for college men, is not only to train these men in the use of their apparatus and their equipment, but also to broaden their whole engineering education. These men come direct from college, are put into a large organization where they are given responsible work to do. They are put in charge of apparatus that is extremely valuable, the mere failure of a switch oftentimes resulting in the ruining of apparatus worth several thousand dollars. In other words, they are given considerable responsibility with the hope of developing their initiative and their resourcefulness.

In regard to the second type of school: Imagine a company which is not conducting any form of educational work. The management are anxious to do something. They do not know exactly what to do. As I have had about ten years' experience in work of this kind, I thought you might be interested in some of the results that we have obtained in carrying on special courses for such companies as The New York Edison Company, the Brooklyn Edison Company, the Boston Edison Company, the Brooklyn Rapid Transit Company, the Consolidated Gas, Electric Light and Power Company of Baltimore, and the General Electric Company at their Harrison Works and at their Pittsfield Works.

My advice, if a proposition of this kind comes up for consideration, is this: Make up your mind definitely, first, that you are going to do something. Fix upon a course of a semi-popular nature that will appeal to all employes, technical and non-technical. Give some kind of course. Then, when the work is done, after carrying it on for a year or two, the great value of the work, irrespective of the actual instruction, will be the *inspirational value.* In other words, if you go among your men and get them into the *habit* of getting together and listening to lectures, they will soon want to do something in an organized fashion. You will have aroused their ambition and they will quickly indicate what they like. To be a success, any course that may be given must be one that the people themselves have expressed a desire for. Therefore, organize some kind of course; it makes little difference whether it is a course in accounting or engineering, but do something. After you have continued that course, say for a year or two, your ideas will change. They are bound to change. You will find your own people will soon form ideas of what they want taught, and you will be able to establish something in the nature of a definite scheme or method which can be standardized. This is the method we have used and in every case that I know of it has been successful.

As an illustration, take the case of a central station, where you can get two or three hundred people together. They represent all ages from sixteen years up to sixty years, all conditions and grades of educational training.

It is necessary, primarily, to give your people some form of educational work which will retain interest. The method we employed five or six years ago was to give experimental lectures on electricity, giving something highly interesting with experiments performed before them. I simply mention this as an illustration—you are giving your foreman or assistant foreman ideas which he can practice. Many times a foreman will get out of a single lecture an idea, one single idea of real value to him, which he can take back to his job; also, many foremen and assistant foremen will attend lectures of that kind for the purpose of showing their own men that they are interested; and when the company itself is carrying on work of this kind, these men will attend where they would not go to a trade educational school. I am not saying anything disparaging about outside educational schools because in a great many cases they have taken the initiative, and they have done a great deal of good work along certain lines. Where the work can be carried on by the company itself, and where you can pick young men of your own and train those men so that they can teach, I think that you will find that you accomplish much good in addition to the mere educational training which you have given your boys; because, as one of our previous speakers has pointed out, much company loyalty results from merely getting your men together. Get your office and factory people, or your sales and your operating people together. You get a very strong sentiment of loyalty among your people. They see you are trying to do something and possibly you can sometimes get the men to contribute to the expense of the course, themselves. As I look back over ten years' work in this field, I can see many cases in which much good has been accomplished, getting the men into the habit of getting up on their feet to talking and to do something. Once you get a man on his feet, get him interested so that he has something to say, once you have aroused the idea of study, further development, and progress among your people, you have well fulfilled your mission. (Applause.)

THE CHAIRMAN: Mr. L. L. Park of the American Locomotive Company is our next speaker.

MR. L. L. PARK (American Locomotive Company): Mr. Chairman, in order to get, perhaps, a clearer idea of what special apprenticeship schools are we may go back to the derivation of the term "apprentice," which, I believe, is based primarily upon a French word, which I will not try to pronounce, but which means "to learn." Now an apprentice is one who learns, and we have come to make it mean one who learns in a systematic way, whether by systematic study or by special training. The term has been for so long a time with us that when we say "apprenticeship" we have come to associate the word with the learning of a trade. And so we may apply the term "special apprenticeship" to anything outside of the trade line in which systematic training is given. In reality I believe that possibly all of our office work schools are special apprentice schools although we have termed them something different. These special apprenticeship schools grow out of the needs of an institution, out of the needs of a corporation. I shall speak largely from the experience of the American Locomotive Company in the limited lines of work which we have. All of our special apprentice courses have grown out of the special needs of departments. For example, the engineer of tests came to me one day and said, "We are not getting the best results in preparing our men for inspection work in the purchase of materials, and we are obliged to send inspectors to the mills to inspect our material. We want to map out a course which will train young men for that work."

So there developed a course for material inspectors. We take boys from high school, a few of them, and give them a year in the chemical laboratory, a year in the physical laboratory and a year in the mill or shop, doing inspecting work, and by a careful selection of the young men we have young fellows who are able to go out to the mills and see that the interests of our company are properly cared for.

Again, the head of the accounting department came over one day and wanted to know if he could not have his men taught how to read blue prints. And so we arranged a blue print reading class. The men came there an hour a week and were instructed how to understand prints. We taught them, also, the principles of drawing. We gave them a few exercises in the making of simple drawings and projections, just enough to get the idea, so that they could follow it out. We tried having them draw the projection from one view, then from another, and also we had them understand the different lines and learn the meaning of the different symbols. So we developed the scheme of blue print reading, and today we have several classes of this sort.

The head of another department came to us one day and said, "I wish we could teach our men what the different parts of a locomotive are." This was from our order department. He said, "We want them to know the use of the flues, the safety valves, the injectors, the air pumps and the thousand kinds of material used. Our men do not know thoroughly what they are." These men are clerical men, and there were, also, a few young ladies in the department doing a part of the work. We started the class for these people so that when they came to each item of material which they were handling they would know what it meant, what it involved and what it did. And if the information coming to them was not complete they could go back to the drawing room and get complete information, thereby saving time in the correspondence relating to the order.

The head of the stores department also came to us and wanted something similar for his men so that we are teaching the men of the stores department the parts of the locomotive, showing them where they go and what they look like. We use a catalogue or a blue print as a basis and anything else that will illustrate the different parts and the different types, so that these men get to see the use of the material as well as to handle it. And they get to know whether it is the sort of thing it ought to be.

Now it seems to me that this principle is fundamentally the one which we are going to follow in all of our educational work. Instead of saying, "Now we want to do something along educational lines, what shall we do and where shall we begin?" our educational work has to grow out of our needs and we will then be doing the thing that we ought to do to make men efficient.

Wherever there is a group of half a dozen men all doing the same sort of work, there is a chance for a class and so the work grows.

I was interested in what the gentleman from the American Bridge Company said regarding help for the men who were not apprentices. And I believe that the trend is that way, that it is eventually going to be the scheme of the corporation to help everybody to be efficient. Wherever there is a man who wants to improve himself, the corporation will put the opportunity to earn more in his way, that he may become more efficient for his own benefit, which in the long run is the company's benefit.

I think that is all I wish to say on the subject. (Applause.)

THE CHAIRMAN: Mr. W. D. Arter is the next on our program.

W. D. ARTER (New York Central Railroad Company): Mr. Chairman and gentlemen, there was a question in my mind when I received the advance copy of the report on Special Apprenticeship Schools as to just how the New York Central fitted in on this subject.

This session is perhaps the first on which a paper on Special Apprenticeship has been prepared. We have in our organization at different shop points special apprentices for the equipment department. However, we have no school and such training as these men receive comes from association with officials and a flexible schedule of different classes of work.

Owing to the requirements of these specials their training includes work of a special nature such as testing, special investigations and the like. All of our specials are located in the Equipment Department.

These specials come under the Supervisor of Apprentices, who shapes the course and attends to their transfers in due time.

There is a course of reading touching on various phases of railroad work.

On completion of the course the special apprentices are taken into the organization in various ways. The special apprentices' field on our railroad is a matter of development and I should be grateful to hear of the practices of allied interests or industrial companies, so that benefit may come in shaping the ends to be served. I thank you. (Applause.)

THE CHAIRMAN: I will call upon Mr. J. W. Dietz next.

MR. J. W. DIETZ (Western Electric Company): Perhaps you have heard the story about the little girl who was crying and her mother came to her to know what the trouble was. "Johnnie won't give me any apple." And the mother went to Johnnie for explanations. "She ought not to be crying; I gave her all the seeds and she can plant them and have a whole orchard."

Mr. Tipper's report rather reminds me of that story. He has given us some suggestions for seeds and he says we can plant them. It does not make much difference when they mature. But looking over these seeds they are not "apple seeds," they are "peach seeds." In my opinion he is not talking about "special apprentice schools." My idea of the special apprenticeship work is that it checks more closely with that which has been described by a number of the speakers here. I got further data as to what the special apprenticeship course or school means in industry by going over the printed matter which is given out by a number of companies representing various lines of work, some railroads, some manufacturing, some insurance. I got from those printed statements just a key word or two as guides to the purpose in establishing such courses. Let me read briefly from some of these. Here is one quotation:

"They, the older employes, are acquiring a new and broader conception of the business as a whole."

Here is another: "This is an opportunity to gain a general knowledge of the company's business."

Here is a third: "The course is therefore arranged to round out the student's engineering training by practical experience; to assist him in finding his field of greatest aptitude, and then to provide special training along certain lines, thus bringing him into efficient usefulness in the shortest possible time."

Still another: "Three objects underly its work,—To assemble a group of men who shall make the actual tests of manufactured apparatus, as a part of the productive work; to provide educational opportunities involving shop experience for college graduates desiring practical work; and to train men for subsequent work in the company's service."

Here is another: "To render better service to the public" and "To increase the individual efficiency of the employes of the company."

Still another and the last: "The special apprentices are trained for service in the system as a whole."

It seems to me we have outgrown this term "special apprenticeship." It originally came about, as already pointed out, as something to distinguish it from the regular or so-called trade apprenticeships, and the distinction was necessary because we were starting older men at a higher rate of pay on a very flexible system. Therefore it was bound to conflict somewhere with the standard course of apprenticeship.

It seems to me fundamentally that, when summed up, it is something like this: "A special apprenticeship course is a general course within a particular business." Now if that is true the special apprenticeship work is distinctly a corporation movement and it is an outgrowth of particular needs. It is an organized effort to produce by training all-round men, whereas the present tendency in organization is to train specialists. Therefore some of the keynote words will keep the purposes before us:

Breadth. Round out experience.

Make company men before you make department men.

Know the system as a whole.

Make men more versatile.

Get the theory plus the practice.

Broaden their vision.

Let us trace for a moment some of the present tendencies along this line of work. Here is a quotation I think will be interesting to you.

"Instruction is the tool by which fitness is most quickly and easily acquired, and the school is the factory where are gathered all the latest labor saving devices known to the educator."

Here is still another:

"Getting the significance of the facts of experience and classifying them into definite generalizations for ready use at some subsequent time. Furnish facilities which give perspective to the details of routine work."

First, what are some of those tools of the special apprentice school?

The one most commonly used is that of progressive experience, to lay out the work with definite sequence, through various departments, so that the man will get an all-round knowledge of the business. There are some nice educational problems involved in that line. We of the Western Electric for a great many years were doing what seemed a logical thing to do, starting right in with the receipt of an order and following it through, tracing the raw material through all the manufacturing processes; but we have come to feel in the last few years that we were backing into the problem when viewed educationally. Now we take up the larger work first. We have the men assemble bigger things and then tear them to pieces, so to speak, so they have a visualization, as Mr. Park brought out, of the products with which they are dealing, and then they can understand some of the definite requirements of our own problem.

Another of the special tools that is very helpful is the observation trip. Almost all of the courses include opportunities for these groups of men to visit departments in which they are not working. Some go so far as to send them to distant states or cities to visit other plants. Some have them visit the work of related departments. Rather distinct and separate from the actual class room work are these trips with an instructor to go over the experiences of other men and to help get straightened out as to the sequence and importance of various parts of the processes and work.

Another feature is the lectures or conferences by company officials, giving the students the fundamentals of the company's policies.

Another method is that of the special text, which has to be special of course for every business. The business must be clearly outlined, presenting to the minds of the new men the salient facts connected with it.

Then come the reports, quizzes, oral and written, which are ordinary educational tools. Some have resorted to correspondence methods when conditions are such as to prevent getting the students together in groups.

Now second: Another definite tendency of this work, it seems to me, is that of placing responsibility for supervision. Many of the organizations seem to have adopted the policy of having this educational director, manager or supervisor report to a committee representing the general departments of the company's business,—the commercial, the engineering, and manufacturing. There seems to be a definite tendency to open these opportunities to men already in the company's employ, as well as to new men. I find that people, as soon as they are held definitely responsible for the educational success of their men, are careful in the selection of the men to be trained.

And I notice too, that there is a much less tendency than formerly to get immediate results. The fact is, the problem is one of building for the future and cannot be judged by immediate results. Look ahead and say, "We are not so anxious to get results now, but we are willing to train for the years to come," and unless an organization can take that point of view, it is going to meet a good many discouragements in connection with the special apprentice work because it is a problem that is difficult to work out and of slow growth.

I am very glad Mr. Ashe spoke of the tendency towards furnishing an opportunity for voluntary study. It seems to me that is distinctly a part of this problem of getting a general education in business.

Now while compulsory training, with which the ordinary special apprentice school deals, is training in the work of a particular company, the voluntary work is primarily for the purpose of fitting employes for advancement. Our experience recently in evening school work bears out the statement that this is one kind of work which is not duplicated in the public school system because we are getting a group of employes to meet together on common ground with common interests and at a time which is most convenient to them as far as their home arrangements are concerned.

In closing, I have one suggestion: I believe there are a number of us here who are earning our bread and butter at this very sort of work, that is, the work of special apprentice schools, and there are enough of us interested in it to justify the holding of a separate round table discussion of some of the more important problems. I hope we can plant some seeds which will bear fruit for us during the entire year. (Applause.)

THE CHAIRMAN: The discussion is now open to anyone who cares to take part.

MR. A. W. EARLE (Winchester Repeating Arms Company): I am a guest who came here with a distinct purpose. My purpose was to learn whether this Convention was to be for a purely academic discussion, or whether it was to lead to some *definite action.* We have heard the discussion in regard to the public trade schools. It is not anticipated that we will be able to take into our corporation schools all of those who might go to the manual schools and trade schools. It may be wise and necessary to train some children in that way.

This morning it was said that we should take the children with such education as they have, and then broaden them. That is the experience I have been going through for the last few years.

The educators have been coming to us, asking for advice as to what the manufacturer or business man desires. I have told them what *we* wanted, but educators do not seem to be men who are disposed to accept suggestions from those outside the teaching profession.

It, therefore, becomes the plain duty of this organization, if it is going to amount to anything, to make a definite step—to take some concrete action by the making up of a committee of active business men who will put the thing right before the Boards of Education of their localities, with the purpose of having them do something towards furnishing a solid foundation in elementary work. Action should be taken by the Convention of this year, in order that results may be obtained at once; otherwise, our meeting amounts to nothing.

Your answer to me has been that the purpose of this Convention is for the bettering of conditions of the corporations and of the country at large. This is the situation that you are meeting. Is the attitude to be one merely of intellectual interest, or of active work? You cannot do better than to make the most of the opportunities that are coming in the way of these queries from the educators and by being prepared to answer them with suggestions that will fit the public school system as it now exists.

Dr. Lee Galloway (New York University): I would suggest to the gentleman who just spoke that educators are very desirous of having the business men make the suggestions he calls for, and I would add that we urge the business men to take definite steps to give something concrete to the educators or the Board of Education—and I am an educator—and they will give the business men exactly what they want so far as the public school system is concerned.

Mr. A. W. Earle (Winchester Repeating Arms Company): The public school people came to me and said: "We want you to help us." I went to work and explained the growing importance of the matter and spent weeks of nights and Sundays writing out a scheme, telling them what was wanted. It was put in the bottom drawer of the desk of the man for whom it was prepared, covered with other papers, and four months afterwards he asked me if I would please turn it in. There was a concrete proposition laid right down to these men, and they would not accept it.

Mr. W. H. Eyler (The Goodyear Tire and Rubber Company): In our shop at Akron we have a course of training different from anything described here this afternoon, so you may be interested to learn something about it.

To make an automobile tire requires about forty distinct operations. Production must flow without interruption from one department to the next or the whole process will stop. Each department's production depends on that of the preceding department. If, for instance, a number of the regular mill men are not at work in their department (where the rubber is prepared), production falls off and every department suffers accordingly. In other words, we are liable to suffer from the disadvantages of intense division of labor.

To relieve this condition our factory manager has evolved a scheme that I believe is quite unique. A gang that now consists of 130 men (called the Flying Squadron) is trained for two years until they become fairly expert in all the production processes in the shop. This is done by shifting them, a few at a time, to the various departments where they stay long enough to learn the necessary operations. Then should a labor shortage occur in any department, enough Squadron men are thrown into the breach to bring production up to the desired point.

To supplement their shop training these men are given regular class room instruction in two courses, one of which is called Rubber Manufacturing Practice and the other Efficiency. The first consists of a series of some 45 lectures, mimeographed copies of which are given to the men. Bound, these papers form a text on the subject of Rubber Manufacturing Practice. Facts are further driven home by open discussions and quizzes.

The course in Efficiency, handled in much the same manner, deals with the fundamentals of economics, passing on to time study and efficiency methods. The object of such a course is to give the men an outlook beyond the immediate departmental work, and have them appreciate the great principles upon which all business rests.

For an interchange of ideas I should like to confer with anyone here having a plan in any way similar to the one I have described.

THE CHAIRMAN: The time for discussion is up and I, therefore, declare the meeting adjourned.

ROUND TABLE DISCUSSION

SPECIAL APPRENTICESHIP SCHOOL

TUESDAY EVENING, JUNE 8, 1915

The Chairman: The question before us is who is entitled to take special apprenticeship courses and how shall they be selected.

A Delegate: I think I can say a few words on that following my debate this afternoon. For ten years my company has maintained special apprenticeship courses which are unique in that they are designed for the development of the administrative and executive rather than the specializing talents. The apprentices are paid salaries during their courses which begin at seventy-five dollars per month and are increased by five-dollar increments until they are receiving one hundred dollars per month at the time of their graduation from the school, the course being three years in all. The method of selection is this: Appointments to these scholarships, for such they really are, are confined to the employes of the company between the ages of twenty-one and thirty, and unmarried. We do not make any rigid educational requirements, but, other things being equal, the man with the better education is given preference and about 80% of our students are college graduates. We have arrived at these requirements after a good deal of experimentation. We have found that to be old enough to appreciate his opportunities, the students should be at least twenty-one and under thirty. We accept only unmarried men because the salaries paid are not sufficient to maintain a family when you take into consideration the many necessary expenses in the way of books, living expenses and moving about from place to place, because that is a part of our plan. The third requirement that he must be an employe of the company has not always been in effect but has been for the past five years for the reason that we found it inadvisable to take many direct from the universities and appoint them to responsible positions because we did not know enough about them. Any young man who can pass entrance examinations and keep up with his studies and maintain himself in college can get a degree, but that does not insure his success in business, so that, in order to know that he will probably succeed, we require a preliminary service with the company. He makes his application for appointment, sending it to officers in charge of the students, but he must pass it through the hands of his superior who may not endorse it. If the endorsement is withheld, he is not accepted as a student because if he does not make good in the particular line of work he is doing, we do not feel that he will make good in responsible and more important work. It seems to me that that is the only safe way to appoint apprentices. We have given no special examination because the difference between our men has been so marked that we have been able to make a choice without examination.

A DELEGATE: How many have completed this course?

A DELEGATE: About twenty. We do not put through any more than we can possibly place in the organization or in important positions.

A DELEGATE: Our plan of selection is a plan of our old apprenticeship system. A young man may take an apprenticeship with us in any one of the trades, and, in order to enter that apprenticeship course, he must attend school one week and work one week. Ours is purely and simply a co-operative plan with the public schools. At the end of two years, after having served an apprenticeship, our selection for the apprenticeship course begins. If a young man has at that time finished his high school studies and has the necessary number of credits to admit him to a university, he is sent as a special apprentice to the University of Cincinnati, in one of the engineering courses. We feel that one of the engineering courses will cover the administrative course necessary in the manufacturing business. He spends two weeks in the factory and two weeks in the University for five years. We have a plan definitely laid out for training at the University and our plan for training at the factory is co-operative with that course so that he will have completed training throughout the whole factory, beginning with the foundry and going through the entire plant. The method of selection is, by steps, merely to take these boys and start them in as regular apprentices; then to take from these any boy who has graduated from high school, who has spent six months with us in the factory and who has shown his aptitude for manufacturing lines and send him to the University. This is for training in the position of manufacturing lines or selling lines. We can determine what line he wants.

A DELEGATE: We believe every boy under twenty-one in the shop should be a candidate for special apprentice work.

A DELEGATE: Boys may or may not elect to attend the school?

A DELEGATE: All apprentices are required to take this training course. All other boys under twenty-one are eligible to the school, four hours a week on company time. When it comes time to lay off employes, the boys in the school are the ones selected to remain.

A DELEGATE: Are they eligible to take up that work immediately on coming to the company, that is, if they so desire?

A DELEGATE: No, that question is left open to the boys.

A DELEGATE: We are interested in the selection of technical men and our system of selection involves visiting colleges, looking up records of men, getting recommendations from professors and determining as far as possible the general attitude of the men toward the work. I would like to hear from some of the other men employing technical graduates.

A DELEGATE: How do they make their selection?

A DELEGATE: Our company has been taking college men from the southern technical schools for the last several years. We take them from schools in our territory because we want to encourage the school and we would rather have native men as far as we can get them. A representative of the company visits the school, gets the men together and gives them a talk of an hour or so, outlining the purposes of the company, and its method of organization. After this, slips of paper are distributed with the request that any man interested write his name and whether he expects to graduate or not. The slips are collected and applications are taken from such as indicate their desire to enter the company. After fifteen-minute interviews with each man, if he appears to be acceptable, he is given an application blank. After the blanks are all turned in, he discusses with the young man's professor the relative merits of the man, inquires into his general standing, both in scholastic work and general standing in the student body. Some of the college professors do not feel that the young men can be sized up in fifteen minutes, but experience has shown us that they can.

THE CHAIRMAN: Definitely laid out plan versus flexible plan.

A DELEGATE: Six months are supposed to be spent in the working floor of the shop, six months in the machine shop of the same shop, about two months in the boiler shop, two months in the engine house and various experience along that same line.

A Delegate: What provision have you for departure from that plan?

A Delegate: I have been recommending that the course be made rigid until the man develops initiative. Until he shows this quality he has to follow the course laid out. Just as soon as he shows initiative we allow him to tell us what he wants. We must make the men find themselves before they get into our organization. The course as laid out for the student covers two years. At the end of a year and a half we break up that course and switch him into the second class work. If we find that he is going to make a good man in an executive position we throw him into work that has a good deal of that nature.

A Delegate: Are these men on production work?

A Delegate: No, our shop does not manufacture anything. They carry on motor power work and special work along the lines of investigation. If we have a particular job and want to do so, we make him responsible for it. We require that this man shall have a certain amount of training before he goes into that line of work. He has to be a college graduate before we admit him as a special apprentice.

A Delegate : We are taking boys who have not gone through a university. We are able to assign a man in a certain department for a given length of time.

A Delegate: In our company every iota of work is production work. The boys work on nothing but production work and we find them to be very successful in same. They are members of the firm from the time they start. They begin at twenty-five cents an hour and are paid in proportion for what they earn.

A Delegate: We try to give the men during the year effective education. Our men earn about 50% of their salary and are paid a salary whether they earn it or not.

A Delegate: Our course is little different and it takes in about six, seven or eight months' study during which the men have test work. This comes in any time we happen to have it. If we start to run an engine this summer, we take a man off the erecting floor of our shop, one who has spent only two months there, and put him on this work, so that he does his test work when convenient for us.

A Delegate: We have been up against this situation during the past year because conditions have fallen so far from normal. We keep our shop school separate. Four hours a week are the requirements for apprentices in the shop.

A Delegate: I want to get the consensus of opinion on this subject because I am up against a superior official who wants a definite course.

A Delegate: The temptation to take these skilled young man without a definite course is too strong. Our course is definite; in connection with extreme emergency, the apprentices may be used on special work. When a railroad is held up by fire, flood or wreck, it is in a state of martial law and the superintendent can take any man and assign him to any work that is necessary. There is no merit in giving a course unless we live up to it.

The Chairman: We have not discussed plans for promotion and keeping in touch with men after they have completed such courses. Our educational department has been delegated with authority to follow the progress of the men for two years after they finish the course. A study of our figures shows that about 80% of the men who left had that amount of experience. We have a definite form of progress report which we send to the department head and a copy of that is filed on a card in our educational department record. We have in our files records which go back eighteen months, showing the places in which various men have worked, the rates paid them and later their standing given them by the department heads. We have to make reports to the company officials as to the men who get the various sorts of ratings in the different classes.

A Delegate: After a man completes a course he should stand on his own legs and should be paid for what he is worth. My company keeps track of the graduates of its student course, which is not difficult, as they are officials of the company. Their promotion depends upon themselves. They are in line for promotion and they work up as their capacity for responsibility increases.

A Delegate: I think we are getting a better figure now, about 80 to 100%—due to a careful selection of the men. Two companies with which I am familiar, as a part of their policy, train men for their customers, so it would not be fair to compare their results in that respect with men who train for their own use.

A Delegate: We are outlining a plan for promotion. We will divide all the employes of the company into two grades. Special apprentices, having finished their course, will be placed in the grade where they may learn the requirements. If there is no way for them to go ahead, we will be kind enough to let them know. If a man finds that he can be a stronger man to another company, we will let him go. He will have to do certain things, viz.: tell about himself, write down how many times he was late, how successful he was in getting out certain work, give his ideas on certain things within his department, etc.

A Delegate: After the special apprentice is turned out and given a definite job, it is desirable to keep in touch with his salary increases for two years or so, to see that he has opportunity for future advancement, and to see that he does not get under a man who is not in sympathy with college graduates or college training. You must be careful not to push a man forward more than his ability warrants.

The Chairman: Are these courses making men prove more efficient workmen than men who have not had such training?

A Delegate: It is so with us.

A Delegate: Their fundamental training puts them in a class by themselves.

The Chairman: What plans for teaching of mechanical processes form a part of this general educational plan? Is it absolutely essential that a man get in and do productive work in order that he learn it or is it enough for him to spend a week or two weeks going through the different classes of work in the different departments, learning the accounting and selling line, simply for observation work? He is not going to be in it in a permanent way.

A Delegate: Our course provides that students passing through the different departments of the company stick to a prearranged schedule to the end that they may get a view of the whole scope of railroad operation and management. All students spend three months in the mechanical department. They cannot acquire any great amount of mechanical skill or learn the details of the work in that time but they do get a knowledge of the working of the mechanical department, and how to fire an engine, and something about round house operation. The first two years of our course are uniform for all of our students and the last two months are spent in the accounting department. Those students who intend to specialize and follow transportation work as their life work receive in addition to an initial three months in the mechanical department another three months in the last eighteen months of their course and we find that they obtain a first hand knowledge of the locomotive. They could not get the same in any other way.

A Delegate: Commercial people feel that shop training is not essential for the men going into the sales organization. A good many of the designing engineers think that men should know something about mechanics.

A Delegate: Do they make written reports of their examination?

A Delegate: They have records covering the various courses.

A Delegate: We have not as yet had an opportunity to give men who go into the manufacturing end of the business a factory experience and we feel that they need it. Of course, we are manufacturing only one particular line and we feel that they would be much better men if they could be given three, four, or, maybe six months' factory experience, then come back into the engineering department, and finally go back into the factory. The same is true in the commercial end. When they once get their bearings, they go ahead with remarkable speed.

A Delegate: We give shop experience first, then have the men go out on the railroad so that they can learn service requirements and then they come back with an entirely different point of view for their shop work.

A Delegate: All of our men are technical school graduates and are, therefore, of a very high class. We have gone to considerable pains in selecting the men. We find that the fellows lack certain things. They do not know how to plan things out for themselves, instead have a set course laid out for them. We put them from the start on one particular job where we want results. The idea of that is to help them to develop their imagination and judgment. Often we let a fellow work along, and, apparently, he is not getting anywhere. We find that these young men want a certain line of work. At the same time, it may be a good thing to let them try that kind of work which they do want and let them prove to themselves in a short space of time that they are not fitted for it. I have in mind one young man who was determined to go into the factory. I did not think he was fitted for such work. Before he got through, he came around and decided for himself that it was not factory work that he was fitted for, but for the selling end. It was exactly the end that I expected.

THE CHAIRMAN: How do you select teachers for this kind of Corporation Schools?

One of the requirements is a knowledge of the particular line which the man is to teach. I think that in many cases this has been the fault of education. The general tendency, as I have discovered it, has been in selecting a man who had some natural aptitude for some particular line, but not any practical experience. A feature of our plan is the moving about of the students from one town to another over our system. We have 6,500 miles of railroad and by the time a student has finished his course, he will have covered that railroad and will be acquainted with the geography from first hand information and with the personnel of the officers who run it. This, in addition to the different types of executive lines with which he comes in contact, is very useful to him. If the master mechanic or superintendent should show special interest in a student, we will let him take a few weeks or months with him as a privilege because he will get more from him than from others.

A DELEGATE: They are thrown in touch with these fellows who impart their general understanding to them. We have two instructors who give their full time to men of this class. One was selected because of his knowledge of the commercial end, and one on account of his knowledge of the manufacturing end. We also have a six-weeks' foundation course. During that six weeks, three weeks are given to meeting the men in groups. One checks up the work of the engineering department and the use to which our products are put, and the other checks up the accounting end, while the third checks up the company's plan of organization.

A DELEGATE: Do you get reports from the teachers or officers?

A DELEGATE: Yes, on each individual.

A DELEGATE: We have a great many salesmen coming in for short periods of time for technical instruction. They may be there only for a day. We have them from a day up to six weeks.

In a good many cases where a man is selected to go out of the selling organization, he will come to the home office and spend anywhere from a week to four weeks getting posted on the technical parts of the work. In order that this salesman may be acquainted with advertising plans, he may be given an hour or so by the advertising manager. He may be given a trip through one of the departments and then spend a day watching the machinery operating and asking questions.

A DELEGATE: There is no one man who has general charge of the salesmen who come in.

A DELEGATE: We have somewhat similar problem in training the men from foreign countries.

A DELEGATE: If the officials of the company help to train these special apprentices, they would become more interested in the scheme than if someone else did the training. It creates a demand for other men like them.

A DELEGATE: Our students are assigned to the different departments according to instruction from the central bureau which is a part of the president's staff. Each of the departments accept them without question and follow instructions according to the rules.

THE CHAIRMAN: What may we expect in the way of co-operation with or from the public schools as part of the Corporation school work?

A DELEGATE: I would emphasize the word "from" rather than "with." We all understand the type of corporation school where the corporation provides the school independent of the publis school. We all understand the plan whereby corporation schools co-operate with the public schools. I want to inquire whether any of you are familiar with any plan whereby the public school comes to the corporation schools in the way of sending teachers. Is it feasible for the corporation school?

A DELEGATE: The city of New York, I understand, is taking that subject up thoroughly. They have started a school with the railroad on Staten Island. The city instructors came to see what we had in the line of a rough school room. Instruction was to be paid for by the city, the place for the school was to be given by the company and the men were to work in the company. The city teachers were willing to go into any subject. A class of twenty was required.

A Delegate: We have one hundred boys but we are of the opinion that those boys should be taught right at the plant. Why should not the public schools be interested in sending teachers for some of the subjects?

A Delegate: The city of New York would like to have the corporation school, but in the first place, their schools are too crowded. Two or three more good-sized corporations there could furnish a sufficient number of pupils for the city to co-operate with the public schools in the way of teachers. I do not think it is a feasible plan.

A Delegate: I have had inquiries from two different cities this last month right along the same line. It seems that the general tendency for public school education is to line up behind Dean Schneider's plan and adopt it in the public schools and allow the public school to co-operate with the corporation. The United Cloak & Suit Company and Baltimore & Ohio Railroad have developed this plan in New York City. The city of New York offered to teach any course provided we would furnish the school and the books.

A Delegate: In San Francisco the school department will give any course for which there is demand and the instructors may be and generally are selected from a particular trade.

A Delegate: Our experience has been that more people want to take our course and we have better attendance with a paid charge. This fee was one dollar ($1.00) for twenty-four weeks, and this is paid all at one time. The men in this course are from twenty-one to forty years of age and are from a good many departments.

A Delegate: At what time are such classes arranged? Our people voted to have shop close at 5:15 and the office at 5:30. The class met at 6 o'clock. Many of the people did not go home at all, and the class lasted for an hour or an hour and a half. Any one person was limited to two subjects. Men who had families at home did not want to stay away and so this was a very convenient method of elimination. The average attendance was 84%.

A Delegate: We have a class run for plant work. These schools are compulsory. Fifty-nine of them are scattered throughout the territory and we find it better to let the men knock off work at 4:30, come to the school at the headquarters in their working clothes, discontinue school at 5:30 and then go home, rather than have them go home and come back for evening work. We find that they work much better than in other places where they come back for two hours in the evening, seven to nine o'clock.

A Delegate: We had some question in relation to the lecture course. We could not get the men out evenings. We then decided to have the lectures on Monday morning, the plant being idle over Sunday. We pulled out half the force on Monday and had two hundred men present at the lecture. The remainder went ahead and got out the material, instruments, etc. The next Monday they alternated and each man gave his lecture twice, attendance was compulsory and the men turned in their time card just the same as they would on a regular job.

COMMITTEE ON PUBLIC EDUCATION

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Wednesday—Morning Session

PUBLIC EDUCATION

WEDNESDAY MORNING, JUNE 9, 1915

PRESIDENT CHARLES P. STEINMETZ, Presiding

THE PRESIDENT: The meeting will come to order. I have just received a telegram from Mr. Corbin, the Chairman of the Committee on Public Education, expressing his regret that he cannot be with us in time for this meeting, but will be here in the afternoon. In his absence I will ask Mr. Allen to present the Committee Report.

MR. E. G. ALLEN (The Cass Technical High School): Mr. Chairman, ladies and gentlemen, my remarks will be brief. Since you have before you the report of the committee, it will be best to let the discussion come from the delegates.

The answers to the questions sent to the employers indicate that employers have not yet come to any definite conclusion as to what they should expect from the public schools. The criticisms and suggestions are general and do not give the school administrators a basis for the establishment of co-operative courses.

The answers received from the school men also indicate that they too are groping about, trying to make courses fit into conditions concerning which they know little.

The hopeful sign is, however, that both parties seem anxious to get together and make the necessary adjustment. The school authorities are willing to make changes as soon as they are sure what changes are required. They are waiting for the business interests to agree on the program. In fact, the subject of co-operative education has, in a large measure, developed into a waiting game. Both sides are willing, but are waiting for the other side to come across with something definite. This association can offer real assistance in bringing the public school and business together. In offering assistance, however, this or any other organization must not forget that if the schools make any serious change we must help to create a public sentiment in favor of such program. The public schools can not go beyond the willingness on the part of the people to pay for the educational system. It is next to impossible for the school administration to create a strong public demand for a new kind of school organization which is not well supported by strong outside influences.

Your committee found that it was difficult to formulate a series of questions which did not overlap many of the fields covered by other committees. But they also feel that the relation of the public school and industry is so important that a committee should be continued under that head.

As stated in the beginning, I believe that it would be best for any further discussion on the committee's report to come either from the floor of this Convention or from those who have been asked to take part in the discussion.

I thank you. (Applause.)

REPORT OF COMMITTEE ON PUBLIC EDUCATION

The Executive Committee outlined the duties of this committee as follows:

> To gather material and compile data where such compilation does not exist, or exists in insufficient and unsatisfactory manner.
>
> Where material has been compiled by some other organization, to inform our members where such material can be found.
>
> To make a digest and review of all such material and base recommendations on same.
>
> In short, compilation, digest, recommendations.

The investigations of the committee have been confined to efforts tending to show what the schools are doing to meet the special requirements of the member employers in their different localities, and what the members are doing to help the public schools to meet these requirements.

There is a great lack of co-ordination of effort on the part of the schools and employers. The schools apparently are teaching abstract subjects without enough practical application to the vocations to be later followed by the students. The employers are not co-operating closely enough with the school heads to show these earnest men what is desired and required, but instead are running schools of their own and duplicating to a greater or less extent the work which should be thoroughly done in the schools.

A questionaire was sent out to employers, on which fifty replies were received. The following is a correlation of the questions and answers:

Q.—Do the public schools in your district make an especial effort to ascertain and then include in their courses the subjects which will be of especial benefit to young people entering your business?

A.—10 answered—No, no further comment.
6 replies—Yes, no further comment.
4—Just beginning.
3—Experimental.
9—Indefinite.
5—Co-operation classes.
3—Technical high school work.
2—Regular high school classes.
1—Manual training courses.
4—Special evening school.
2—Trade schools.
1—Vocational training.
7—Returned without comment.

Q.—In what way could the public schools be of more help to your employes, either before or after they enter your employ? (Please give name and address of the public school official in your city who is particularly interested in co-operating with you.)

A.— 4 answered—By establishing co-operative classes.
1—Teaching English to foreigners.
11—Reference made to school men.
11—Not answered.
3—State schools are of no service to them.
2—Better general education.
9—Teach fundamental subjects.
1—Conduct continuation classes.
2—Teach children to apply general knowledge.
2—Vocational courses in the grades.
2—Give students vocational guidance.
3—Obtain teachers familiar with industries.
6—Indefinite.
1—Course in salesmanship.

Q.—In what subjects do you find it necessary to duplicate or supplement the educational work of the public schools?

A.— 3 answered—Do not need to supplement school work.
5—Supplement in drawing.
12—Supplement in mathematics.
12—Supplement in English.
2—Supplement in mechanics.
4—Spelling.
2—Grammar.
1—Commercial geography.
1—United States history.
1—Civil Government.
1—Salesmanship.
3—Penmanship.
6—Arithmetic.
8—Not answered.
9—Indefinite.

Q.—Mark with an (X) the following subjects in which you find your employes generally well prepared, and with an (O) subjects in which they are most deficient:

English
General vocabulary
Use of good English form
Knowledge of grammar
Penmanship
Spelling
Mathematics.
Arithmetic up to fractions

Common fractions
Decimal fractions
Proportions
Knowledge of simple equations
Measurement of angles
Measurement of area
Measurement of volume

Use of hand books, from which to obtain data for the working out of mechanical calculations.

The answers to this question cover such a wide range that it is impossible to make anything more than a general statement. In general, subject of English including general vocabulary and a knowledge of grammar, seem to be fairly satisfactory; while by far the greater number of answers indicate that arithmetic, up to fractions, is about all that can be made use of in the industries. Practically no training is given in the use of hand books.

Immediately on receiving the names of the school men referred to, a general letter was sent to them, but owing to the shortness of time allowed before this report had to be submitted, the replies were very incomplete in number. They were, however, very interesting in details.

Q.—What one thing can the manufacturers do to enable you to be of more help to them?

Practically all stated that the one thing the employer could do of special value to the public school would be to take a more active interest in school affairs.

A.— 1 answered—Furnish schools with a statement of their needs.
5—Establish continuation classes.
1—Only practical workmen be employed as instructors of industrial subjects.
1—That influential employers be appointed to the school board.
2—Not answered.

Q.—Do the public schools in your district make an especial effort to ascertain and then include in their courses the subjects which will be of especial benefit to young people entering business?

A.— 1 answered—Yes, by arranging conferences with various groups of employers and employes, and conducting continuation classes in afternoon and evening schools.
3—Commercial courses.
2—Yes, no further comment.
1—Pre-vocational work, including work coming under the head of manual training, commercial geography and industrial history.
1—Indefinite.
2—Co-operative classes, meeting a week in school and a week in the shop.
2—Continuation classes.
2—Evening schools.

(The above answers were received from ten different schools, some suggesting several different methods. This accounts for a total of more than ten answers in the above tabulation.)

Q.—In what subjects do the manufacturers find it necessary to duplicate or supplement the educational work of the public schools?

A.—2 answered—Mathematics.

2—English.
3—Mechanical drawing.
2—Don't know.
1—Shop work.

Q.—Are there any special subjects that have been brought to your attention in which the manufacturers would like to have your boys and girls more fully prepared?

A.— 2 answered—English, mathematics, mechanical drawing.
3—No, with no further comments.
1—Spelling and penmanship.
1—Think they would welcome suggestions from employers.
3—Not answered.

RECOMMENDATIONS

If the members of this Association are to better the quality of the material coming to them, so far as their requirements are concerned, members of this Association must take the initiative. They must interest themselves in the educational systems in their localities. They must meet the men in charge of the schools. They must explain to these men what their requirements are, and actively help in bettering the equipment of their own employes, at least as much as they do in the re-designing of some special machinery to fit their individual requirements. Until our members do this, they cannot expect much increase in efficiency on the part of their local school systems. There is no one to whom this subject is of more vital interest than to the employer himself. Modern industry is becoming so highly specialized that it will be impossible for those not giving the matter deep thought, and the application of the most up-to-date practices, to continue to exist in the industrial field where the competition is strong.

It is only through active interest in this subject that employers can reduce the cost of educating their employes to a degree commensurate with what they would consider practicable in their other lines of activities. It is stated on good authority that in the average plant the cost of educating the least skilled laborer averages from $35 to $45 each, and that in the case of certain classes of clerical help this runs from a minimum of several hundred dollars for each employe, upwards. No small part of this expense is due to the fact that the employe does not properly understand his work, coupled with the impatience of the employer over the fact that the beginner is not, in his opinion, properly grounded in such fundamentals as English, Arithmetic or Spelling. If the employe has already received a practical grounding in these fundamentals he grasps his new tasks more quickly and, with the consequent understanding of his work, likes it better. It is an old truism that we cannot succeed at anything we do not understand and like, and if we do not understand it we cannot like it.

The principals of the various schools heard from indicated that they were ready and willing to co-operate with employers and to change their curriculums insofar as might seem advisable, in order to better the curriculums from the employers' viewpoints.

We recommend that the incoming committee make it their first duty to get the members more actively interested in the educational requirements of their own business, and then taking up the subjects more actively with the educational heads in their own districts.

This committee has scarcely scratched the surface of this big subject, and we believe that work should be done along the lines already being pursued by the Department of the Interior in dealing with industrial training for immigrants. The Government Bureau of Education has been making a general inquiry throughout the country concerning the facilities provided by public authorities and private agencies for the education of immigrants, giving special attention to the industrial training provided. This is the biggest problem that American manufacturers have to meet and it must be met squarely—especially in the next few years—if it is to be solved at all successfully. This is such a large subject that it may be deemed wise by our Association to appoint a special committee to investigate it.

An analysis of the questionaire replies from both members and educators is recommended to every member. The committee believes the results will be apparent and therefore tabulations are submitted without comment.

Mr. E. G. Allen of the Cass Technical High School, Detroit, has spared no effort in obtaining the facts submitted in this report. His line of work makes him eminently fitted to assist in this branch of our investigations.

ARTHUR E. CORBIN,
Chairman.

THE PRESIDENT: Ladies and gentlemen, the subject matter of the report this morning and the report which will be brought before you this afternoon are, in my opinion, of the greatest importance, as they deal with the most serious problems of the modern corporation,—industrial education.

It is significant in the report that those public educators who have been asked for their opinion all expressed their willingness to co-operate with the industry, but desired to be advised by the industry what the corporation needed. Therefore, it is now up to us to exert our influence on the corporations and cause them to take more interest in the public educational systems of their locality, and to assist and advise public educators so as to make the public education more efficient and more satisfactory than it is at the present in the opinion of many people.

The public educational system is under fire by the general public almost as much as the corporation is; and there is a demand to do something, but the general public cannot tell the educational man what to do. Our opinion now differs widely from that of the old time school man who considers that the general education which was given generations ago is still the only thing that the public school should endeavor to give. The present-day critics condemn the American public school system as a complete failure because the graduates of the publice school have not learned anything whereby they can earn their livelihood. Personally, from my study of the subject, I am rather inclined to addition ,to the general education, and the duty of the public school to teach a trade. The limited time that the school has is altogether too short to give any technical training in the grades in addition to the general education, and the duty of the public school is general education. But the general education of the Twentieth Century, of this industrial age, includes more than was necessary generations ago. It includes manual training as a mandatory subject throughout all the grades, beginning with the kindergarten work where most of the time is devoted to manual training, and reaching up to the shop work as an essential part of the college course. But manual training is understood to be the teaching of a familiarity with the foremost tools of modern industry and modern life, and not education in a trade. Therefore, we should not demand from the public school graduate that he should have learned a trade; but we should demand from our public school system that the graduates will know what trade or profession they desire to follow. This is the duty which public educational systems must take up, the development of an intelligent system of vocational guidance based on the familiarity of the teaching staff with the characteristics of the pupil, and based on the adaptability and the interest shown by the pupil in manual training and other work.

And furthermore, it is in my opinion the duty of the public school system to take care of the public education throughout the community, including that of adults as represented by evening schools and extension schools, English classes, libraries, and so forth.

And here I want to direct your attention especially to the public libraries. A very extensive part of the educational work is being done by the public libraries, and at present most of them are either under the control of the political administration of the municipality, which is inefficient, or under control of a self-perpetuating board of trustees, which is just as ineffective. The public library is essentially a part of the educational system, and should be under the educational department.

In the discussion of this important subject, we shall be obliged to limit the time of each speaker to ten minutes for the present. However, I desire especially to ask you not to consider this as a limit for our thought, but to realize that the greatest use of our Convention is derived through a study of the transactions and proceedings, and therefore let us use the oral discussion merely to give abstracts of what we desire to bring before the Convention and hold our full discussions for the proceedings.

I will call on Miss Harriet R. Fox to open the discussion.

MISS HARRIET R. FOX (of Strawbridge and Clothier): Mr. President, ladies and gentlemen, in opening the discussion upon the report of the Committee on Public Education, I shall emphasize several matters suggested in the report, rather than present any new ideas. In the report, a reference is made to the desirablity of a more complete elementary education. I believe that the best work the elementary public school can do for business, though business houses have probably not yet recognized the fact, is to give a more thorough fundamental education. I believe we should carry this education beyond the point of what seems to be practical, and take it into the realm where it becomes what the schoolman calls cultural, but which is in the end, eminently practical too, not only for the few hours a day while we are at the job, but for all the rest of the day when we are out of it. That other sixteen hours is quite as important as the eight hours spent in industry. There is a tendency to value education in dollars and cents, but this cannot be done. The result of education is more than the ability to do a certain kind of work; the value of education is greater than its apparent worth as expressed in salary. While education does have a commercial value its full value is far-reaching, influencing everything that goes to make up life.

President Harris, of Bucknell University, said to his graduates one year: "As a result of your college work, you may not be able to earn higher salaries than men who haven't had your training, but I know you will enjoy more the money you do get." That is the other side of education, which the schoolman knows and has known for years, but which the business man has not yet seen very clearly. But to revert to the strictly practical side of general education, let me say that, again and again, particularly throughout the last year, I have seen that the more preliminary training, or rather the more efficient the grounding has been in the elementary branches, the better are the sales-clerks and the office helpers who enter industry. Far more work can be done in correcting correspondence with the girl who has had several years of high school training than with the girl who has learned stenography and typewriting, but who doesn't know very much besides that. Even with our junior help we find that, if girls and boys have finished the eighth school year, we have more to work upon in training them for advanced positions. Vocational training will form a part of the school day, more and more with each year, but we ought to work earnestly to have the first eight years devoted to general training and we should not take any part of that time for specific industrial education. Dr. Steinmetz expressed the same thought at our first Convention, and I find added confirmation of its truth as my experience in business supplements my experience in the schools. The place for training that is distinctly vocational is in the ninth and tenth school years and in as many years after these as the particular training may require.

The second point of which I want to speak is what is known as pre-vocational work. That is the special training which should be put into the elementary school. Manual training or pre-vocational work has high cultural value. That again sounds, possibly, not practical to the business man. All of us know that the ability to handle tools is a convenient thing and therefore practical. But a far more valuable result than that is the training in accuracy and in sticking to a proposition which is undertaken until it is finished. The latter idea, once obtained, is an aid in every activity that comes into life, for girls and boys alike. When they come to a particularly trying piece of work, they will do it better for having learned this one principle of sticking to a thing until it is completed. That is what I call cultural work, and I think you need it as much in business as elsewhere, and that you need it in all lines of work, in trades and in professions. The principles of accuracy and perseverance, as well as many others should be taught in the elementary school, and they can be developed partly by the pre-vocational work.

The third matter of which I want to speak is this: If the members of this Association would better the work in the schools they must take the initiative, they must interest themselves in the educational work of the districts in which they live, and, as someone has tersely said, "Don't knock; boost."

On the last page of the report, the committee says: "We recommend that the incoming committee make it its first duty to get the members more actively interested in the educational requirements of their own businesses, and then take up the subjects more actively with the educational heads in their own districts." It is easy to say that we are not getting what we want, but do you really know what you want? Have you studied your business to find out exactly what is needed? That is a task for you rather than for the school. The schoolman has not yet had the opportunity to find out what is needed on the inside of various businesses. That is the task of somebody on the inside. How pupils are to be taught, you do not know; that is not your business, that is the business of the school. But the thing you want young people to know, or what you want them to be ready to do, in other words, the educational requirements of your business, can be best stated from the inside.

Having made this study of the business the next question is, how are we going to get the result of the study before the schools? Heretofore most business men have been well satisfied to say that they are not getting the product that they needed from the schools. We suggest now the two steps in advance—first, discover just what is needed, and then convey that information to the schools. The next consideration is, how shall this information be given to the school. The business man usually makes his comments when there are no schoolmen present, and the statements go to the press, and when seen in print they do not look exactly as they sounded when the business man uttered them.

Now I want to bring to you what I know to be a practical way in which business men and educators can get together. The school will welcome the business man. Not every school, and not every business man, will welcome the chance of co-operation, but many will. We are solving that problem in Philadelphia. We have there what is known as the Public Education Association. This organization is not connected with the Public Schools, nor with the Board of Public Education. It is more like a community club or a city club. Included in the membership are business men and women and professional men and women. One section of the Association is known as the Technical and Industrial Conference. The men and women identified with this conference meet once a month for a luncheon followed by talks and general discussion. The speakers include educators and business men. This conference brings about a better understanding of each other on the part of the members and produces a splendid spirit of co-operation. The schools need information from the business world and industry needs help from the schools. The business man has the opportunity to tell his need and what he wants, if he knows it; and if he doesn't know it, he tries to find it out by conference. The schoolman learns the practical value of some things which he had deemed unimportant and the small value of others which had appeared to him important. Another feature of the work of the conference is the discussion of proposed legislation dealing with labor and school matters. At the general meetings of the Association matters of general educational interest throughout the State are brought to the notice of the members.

It is idle for us here in Convention to talk of the need of cooperation, and then do nothing to bring it about. If we really want it, let us take the initiative toward securing it. An association such as I have suggested is a practical way for the schoolman and the businessman to get together; it is a workable idea. I recommend to you, therefore, the organization of such an association in your own community. (Applause.)

THE PRESIDENT: Ladies and gentlemen, I believe we are all very thankful to Miss Harriet Fox for not only telling us what should be done, but also showing us how it could be done. This is exactly what we need to do, because we must lay a foundation, outlining what improvements should be made, and this we have not yet considered. We must show to the public at large and the member corporations how it should be done.

I now call on Mr. E. G. Allen to give us his views.

MR. E. G. ALLEN (The Cass Technical High School, Detroit, Michigan): Ladies and gentlemen, inasmuch of this Association represents the business side of Industrial Education, and the attempt on the part of the employer to educate his own employes, I will confine my discussion to the problems presented to the public schools when they attempt to co-operate in the education of a large number of individuals scattered throughout various occupations and industries.

The four large divisions which have presented themselves at Cass Technical High School are represented by the metal trades, building trades, electrical industries, and general office work. Whether the training be confined to those who might be classed as apprentices or beginners in any of these lines, or whether it be concerned with extending the education of those who are already engaged in the industries, the question arises as to how much of this educational work should be attempted in the schools or given directly in relation to their work in the shop.

It is pretty generally conceded that a combination of the two factors is necessary to get the most direct and paying results. When we attempt to tabulate the distinct classes of work which may arise in any business, and which call for specific instruction, it soon becomes evident that there must be some general basis established from which the student from the schools can make a quick, positive adjustment to some of the various lines of industry.

In the analysis of the machine shop and the electrical industries, the attempt is made to classify various machines and divisions of work, and so finally bring these classifications together so as to show those things which are common to all.

For three years we have been conducting continuation classes at Cass Technical High School, both for apprentices and for workmen more or less skilled in their respective trades or lines of work. The great difficulty we have met with is the lack of definite trade requirements, the mastery of which would assure efficiency in the respective trade.

On the completion of a certain amount of work in the school, supplemented by not less than two years practical experience, it is our plan to issue a statement that a man is a machinist, a patternmaker, sheet metal worker, or whatever the case might be. When it came time to issue the first diplomas, we found difficulty in answering the question, "What is a machinist, what is a carpenter, what is a patternmaker, what is a stenographer, etc.?" What qualifications should these workers have before we could confer upon them a standing which would have any significance whatsoever? To meet this situation, we have developed outlines of requirements for machinists, and outside electrical distribution. Some ten or fifteen other divisions will be necessary before the electrical outlines will be complete. Similar outlines are being prepared for carpentry work and for general office work.

These outlines are being used as follows: Students applying at the school for admission into day or evening classes are given an outline covering the particular industry in which information is sought. If it be, for example, in the machine shop division, he is asked to check all the facts that he knows about the machine with which he is most familiar. This gives at once a starting point, and, what is more important, places before the applicant exact requirements for meeting the qualifications of one who is a master of the particular machine he wishes to operate. The combined outlines meet the requirements of the trade.

Approximately 70% of the knowledge gained in one machine is common to all others. The worker on the single machine is thus given the means of finding out what part of a journeyman's qualifications he may possess. In other words, the outline furnishes a measure for their accumulated knowledge and experience.

A review of the electrical work, will show that the knowledge required in any one division can be transferred to any of the other divisions to an even greater extent than can that for the machinists.

When a problem is fully stated, it is more than half solved. If we can assume that the outlines meet fairly well the requirements for the machinist's trade and outdoor electrical distribution, it will be comparatively easy to make a division of work between the school and the respective industries.

All will no doubt concede that the school should supply the necessary mathematics and drawing. I might say in passing that so far as mathematical content is concerned, the outlines given meet the requirements of the metal trade, building trades, electrical trades, and suffice for all high school sciences, including chemistry and physics. We have proven at Cass Technical High School, that regular high school requirements will not be violated if all mathematics are made to conform to the outlines.

A large amount of shop nomenclature, general shop knowledge, and machine adjustment can be given in the schools equipped with the necessary shops. Speed of production can only be acquired by experience in the industry. In the machinists' outline for example, only the five standard machines, the lathe, shaper, planer, drill press, and milling machine, with bench and assembly work are given as machinists' requirements. Cass Technical High School will issue a machinists' certificate to anyone who can meet the requirements in these six divisions. The individual and the job should meet the requirements for the special types of machines.

If the members of this Association wish to get full value from the public schools it will be necessary for them to make specifications for their definite requirements. Personally, I do not believe that the employer should expect to get from the public schools the identical training that he might need in his business any more than he should expect to get all of his equipment fully adjusted to his needs from the houses making standard stock. Card catalogs, accounting systems, office and shop organization, must be adjusted to conditions at considerable expense. The only excuse a company can have for not paying as much attention to its employes as it would to its equipment is simply because when the adjustment is made it does not own them. Many concerns are making this excuse.

On the other hand the school should furnish direct to the industries young people who can take directions quickly and intelligently and who can adjust the standard knowledge gained in school at least as readily as can standard equipment be adjusted.

For you to say to the schools, as did many of those who made replies to the questionaires of this committee, "We want general education, give us men who can think," "The school training is of no value," etc., etc., does not give school men very much of a handle to get hold of in adjusting themselves to your problem.

It is hoped that the members of this Association will follow out this suggestion and make schedules of definite requirements for every position they have to offer, and place these schedules in the hands of every employe, and, particularly, in the hands of every school administrator in your community. By so doing, you will give every man means for obtaining the position next above him, and if modern efficiency is to succeed, the way from the bottom to the top must be clear and well defined.

THE PRESIDENT: I will now call on Mr. A. L. Rohrer of the General Electric Company to give us his view.

MR. A. L. ROHRER (General Electric Company): Mr. President and ladies and gentlemen, I wish to say, first, that I am heartily in accord with what Miss Fox has brought to us this morning. She said several things which I had in my own mind, and she did it so very much better than I could. It seems to me that the keynote of her remarks is "co-operation." In order that you may get my point of view this morning, I want to say that I happen to be President of the Board of Education of the city in which I live, and I should like to know how many of you gentlemen are familiar with this part of the problem. I will ask all those who are active members of the Board of Education in their respective towns or cities to raise their hands.

MR. A. W. EARLE: May I say that I am not a member of the Board of Education, but a member of the Advisory Committee of one of the schools, and active in the work.

MR. ROHRER: I am interested just now in ascertaining how many members of boards of education we have here. Will those men who are active members of boards of education in their cities or towns please raise their hands? (Hands.) Only one. I am sorry, extremely sorry; I think you gentlemen are making a great mistake. Unless you are co-operating to the extent of giving part of your time and part of your activities to the work of the board of education of your city, you have no right to make any sharp criticism on the work of your public schools.

Criticism that does not carry with it a good practical suggestion is not worth a tinker. Therefore, all criticisms about the work of the public school that do not carry practical suggestions, are of no account whatever. I have no patience with a person who criticizes, unless he sits down with the teachers or the board of education to discuss the particular matter in mind. Practical men and women can help these matters greatly, and I feel we should give at least part of the time we now spend in criticising the work of the schools to discussing them directly with the public school teachers and superintendents. Like every other situation, this has two sides. I hope, Mr. President, that when a vote is taken a year hence we shall see more than one hand go up. Now I shall ask all those to raise their hands who have in the past five years been a member of the board of education in their cities. (Four hands raised.) That is also a very poor showing.

DR. H. C. METCALF: I should like to say that I have not only been a member but am now a member of the board of education, but I did not raise my hand.

MR. ROHRER: I am very glad to count two instead of one on the first vote.

MR. F. W. ATKIN: There are some here who are on subcommittees appointed by the board.

MR. ROHRER: Another very good suggestion. I shall ask for a vote on that. How many of you who are present here this morning are members of advisory boards, or assist the board of education? (Five raised hands.) Well, that is a poor showing also.

It seems to me that if the representatives of this Association are vitally interested in advancing the work of the public schools there is certainly some work ahead, which I leave to you to carry out. Miss Fox has shown us how it is possible to get results by co-operation; the formation of the association which she mentions is a capital idea. Personally, I think being a member of the board of education is a better way.

I realize that in some cities the board of education is so large as to be absolutely unwieldy and that it is almost impossible for a small group of progressive members to accomplish anything. After reading this morning's paper I made some inquiries and learned that in this otherwise wideawake city of Worcester the Board of Education consists of thirty members. I think you will agree with me that this is not a board; it is really a town meeting, and it ought to live up to the traditions of town meetings—hold one meeting a year to appoint an executive committee of five and then adjourn.

Now, to come more particularly to the matter we have under discussion this morning—that is, vocational training—I agree in the main with what Dr. Steinmetz has said, and I think we are pretty well in accord as to what should be done in the public schools up to and including the work of the sixth grade. After passing the sixth grade, vocational training should begin. I always have in mind the fact that the city boy and girl of to-day are very much handicapped, because they have had little or no opportunity to use their hands. The boy from the country has the ideal training, because he has had the opportunity of doing all sorts of repair work on farm utensils; and to-day we find when a young man from the country comes into the shop and starts work it does not take him very long to make a good showing, simply because he is accustomed to doing things with his hands. In planning vocational work in our city schools, we ought to substitute for the boy something comparable to what the country boy has had. When these boys and girls in the city play in the streets or on the playgrounds, we find that they are not resourceful in games. Therefore, it is necessary to employ instructors for our playgrounds, so that the boys and girls may be taught how to play. Do you think that necessary for the country boy or country girl?

So far we have had various definitions of vocational training. Recently one was framed by some commission. (Commissions seem to be doing everything for us in these days.) Their definition was something like this, "Vocational education is that form of education whose controlling purpose is to give training of the secondary grade to pupils from 14 to 16 years of age, so as to fit them better for employment in trades, in industry, in agriculture and in helpful arts."

Some of us disagree with the idea of limiting this education to the sixteenth year. We think it should be extended to the eighteenth year and our laws should be changed so as to make compulsory education cover the period to the eighteenth year and allow more work to be done by this vocational training. If this should ever be done it is likely that in many cases part-time schools will be unnecessary. There are also people who object to the evening school, on the grounds that all educational work should be done during the day. We can agree with that in the main, but it seems to me that we ought to give an opportunity to those who are willing to give up their evenings and take advantage of educational facilities offered them.

As to the particular form of this vocational work, I think we all agree that it should be a combination of class-room work and shop work. There is some discussion as to the selection of the teachers. Shall they be the schoolmasters, or shall they be the trademasters? I think we would agree that the teachers should preferably be trademasters. The difficulty we experience is that the number of trademasters who have the ability to teach is limited. Trademasters are now taking advantage of summer schools to secure training in the art of teaching, and as years go by we shall find the supply of trademasters who are good teachers increasing.

Now, may I refer definitely to one plan of co-operation between a corporation and the public schools? Last winter, in Schenectady, in connection with the night schools, the Board of Education co-operated with the General Electric Company in starting a night school in accountancy. Under the State Educational Law, our Board is allowed to furnish instructors for such night schools. The classes operated were open to employes of the Company in the Accounting Department. A notice was sent out and applications received from 240. Instruction was given four evenings of the week and classes were organized as follows:

Mondays—Elementary bookkeeping, arithmetic, higher accountancy; Tuesdays—business English, typewriting; Wednesdays—elementary bookkeeping, arithmetic, higher accountancy; Thursdays—business English, typewriting. The final registration for all classes was 260. Each person was required to pay a registration fee of one dollar. It was understood that this fee would be returned at the end of the term, provided the attendance was 85 per cent. or higher. The Board of Education paid the salaries of all the instructors, while the General Electric Company furnished all the necessary facilities in the way of class-room, textbooks, materials, etc. The registration fee was refunded to 121, which shows a very good attendance. The sessions were from 5:30 to 7:00 P. M. The superintendent of the evening schools of the city exercised general supervision over these classes at the General Electric Works; he selected the instructors and they acted under his direction, so that it was all a part of the system of evening schools.

It was a pleasure to see the interest manifested by every member of the class in higher accountancy. The Board of Education was fortunate in being able to secure the services of a certified public accountant from the State Comptroller's office, who conducted this particular class. The work of this evening school was started as an experiment, but it worked out so satisfactorily that arrangements have already been completed to continue the work during the winter of 1915-16.

I have given the details of this particular co-operative work, hoping it may serve as a suggestion for you to take back to your own city. It may be that some of the member corporations employ foreigners. These are always anxious to learn English. Therefore, if a similar plan could be worked out for their education, splendid results would be obtained.

The President: I think we are very much obliged to Mr. Rohrer for directing attention so forcefully to our deficiencies in not taking sufficient interest in the public educational system; but I am inclined to think that the result of his vote was not quite fair, and I would like to call upon you for another vote by asking those ladies and gentlemen who have belonged to boards of education or have belonged to an advisory board in any co-operative organization or who in any other manner take active part in the public educational system of their municipality or who represent a corporation in which some other member takes an active part in shaping the public school system, to raise their hands. (Raising hands.) Well, that is much more encouraging. It is about one-half of the membership. It ought to be unanimous, however. (Applause).

I will now call on Dr. Robert O. Small of the Massachusetts Board of Education.

Dr. Robert O. Small (Massachusetts Board of Education): Mr. President, ladies and gentlemen, I have been assigned to the discussion of the Report of the Committee on Public Education. I do not know how generally this report has been distributed. You can follow what I have to say a good deal better if you have a copy of it, because I intend to confine myself to the report as printed and not allow myself any flights of fancy except as they bear upon that report.

The first statement which I wish to take up is that there is a great lack of co-ordination of effort on the part of the schools and employers. This is not strange, as the previous speaker has said. There is no concurrence of opinion on the part of educators and employers that there ought to be any co-ordination. We do not have to go very far to discover that. It is not because each has not decided opinions one way or the other. It is because they have given but very little thought to their mutual interests. The schools are teaching abstract subjects with little thought of their practical application to a vocation to be later followed by the student.

Some ten years ago the educators argued to this effect, and the whole energy of progressive educators has been directed towards calling your attention to this fact and correcting it in so far as it deals with the making of an education practical and applicable to practical affairs, but not in so far as it deals with the specific trade training which will enable a boy or girl coming from the regular schools to go into a specific place and render trade service. There is a great deal of question as to whether that is the job of the regular public school. I think that that is the particular work of the special school. The work of the regular school is general education, and the making of that general education as practical as possible—tying it up to actual world affairs as closely and as intimately as possible.

The employers are not co-operating closely enough with the school heads, showing these earnest men what is desired and required, interesting our educators in learning where their schools are deficient so that the trade schools or the part time schools will not have to duplicate to a greater or less extent the work which should be thoroughly done in the public school. I agree with the statement in so far as it involves any co-operation which has been made along this line. It has been one of the great desires of educators to secure co-operation, effective co-operation: it has been very difficult to get it.

During the past year we have had in the City of Boston, in connection with my work, a continuation school. At the outset, the attitude of the majority of the employers was that of indifference; to a certain extent they felt that they were being imposed upon by this new requirement. As they became acquainted with school men, and with their ideas, there has been secured cordial co-operation. In such instances and under such circumstances the work has shown the possibilities of co-operation. The lack of co-operation is not so much a matter of attitude as it is a matter of lack of knowledge and indifference as to what is being undertaken or as to whether anything has been undertaken.

I wish to comment on certain matters which I have heard here this morning.

Just let me say this as to the publicly supported vocational schools, as to what they are doing. Practically everything that has been suggested from this platform as good is the ideal of these schools now. Your speakers do not know the extent to which your fundamental theories and notions are the theories and notions which are being promulgated by the Department ot Vocational Education in this Commonwealth and the extent to which they are being practiced in many of its schools. They can be practiced to a very much greater extent, and with much more material results in proportion to the interest which you ladies and gentlemen show in the movement and the help which you accord.

There was a certain questionaire letter sent to the employers. First question: "Do the public schools in your district make an especial effort to ascertain and then include in their courses subjects which will be of special benefit to young people interested in your business?" There was a variety of replies to that question, but the dominant note in all of those replies is one of indefiniteness as to whether they "do or do not." The replies range from the employers who know that the general education of the public school is not all that is necessary, but that they are endeavoring to assist the employers, down through to the employer who wants a specific vocational education given by the regular schools.

My comment on the replies to that question is that there is a great need for more definite information as to what does constitute assistance and help, and that until there is a concurrence of opinion in regard to what constitutes the assistance that you need and may reasonably expect, there can be very little progress made toward securing it.

The second question: "In what way could the public schools be of more help to your employes either before or after they enter your employ?" The same indefinite notion as to what would constitute help. It is shown by the great range of opinions in the answers to those questions. The dominant note seems to be that they can be of assistance in giving a general education. That is the work of the regular public schools, and it should be done better than it is being done. I am not invidious in my remarks, because I think the public schools are doing good work, but I think that the work that they are doing should be done better; it should be carried to the point where it meets your requirements so far as they involve a general educational requirement, but not to the end that the education shall meet the specific requirements of industry. Just as soon as the demand is for some special equipment which your industry needs, it is another school's work, it is not the work of the regular public schools. It is the work of a special public school, perhaps; a special school, certainly.

In the replies to this question, I sense a real demand on the part of the employer for vocational education.

Three people reply that State schools are of no service to them. I am very much interested in that reply. I wish I could get to the source, as I wonder what they have in mind, what they have in mind a State school should do.

MR. ALLEN: I beg your pardon. They mean schools in general; that does not mean the schools of this State, that means all schools.

DR. SMALL: I was in earnest in my request for that information. We need to know in what respects the schools do fall down, but that answers the question.

The third question: "In what subjects do you find it necessary to duplicate or supplement the educational work of the public schools?" Notice the great range of subjects demanded. Some of them it is avowedly the business of the regular public school to equip pupils with. I would include mathematics, although I would question the range of mathematics; certainly they should teach simple arithmetic, but when you get into calculus and trigonometry and some other things that are specially needed in industry, there is question whether the regular public school should give all of the pupils the specific help you need. With

English and spelling, there is no question. But when these men come along and say that they are falling down on commercial geography and on civil government and on economics, they are going over into the range of special equipment. One of my best stenographers the other day didn't know where the town of Boxborough, Massachusetts, was and it is one of our neighboring towns. If I rated my stenographers as poorly prepared because of some of that special information which they lack, they would fall down, and yet I rate them as pretty well equipped.

I think what is in the mind of the employer who answered that question in that way is that he wants us to make more practical the information which the children are given—in other words, he would say the children are not being taught to apply their education. In this suggestion and in many employers' suggestions there is the idea that this can be done by giving more drill, by giving more attention to certain subjects. That is futile. It cannot be done. You can drill boys and girls until they are gray-headed old men and women on the facts of geography, civil government and commercial geography, and some other things of that kind, and the first time they are called upon to know some fact they will fall down. You cannot get the desired result by mere drill. You can approximate the better application of the knowledge that they do have by better methods of teaching, but not by more or by mere drill.

The fourth question: "Mark with an X the following subjects in which you find your employes generally well prepared and with an O the subjects in which they are most deficient." I have but one comment to make on the replies to that: There is a suggestion that by being taught the use of handbooks for getting at facts they would be better able to use these facts. Note the character of handbooks. They contain so much information stored away in them that the pupils could command little of the information by any drill the regular schools could give them upon it. They contain a tremendous amount of valuable information which is of specific value for some people, but you present any number of them to all students and you simply stagger them.

If what you have in mind is the idea of teaching pupils to consult handbooks and to understand rightly the use of indices, or what we call giving them the "dictionary habit," it is a mighty valuable suggestion and probably has not been developed to the extent it should be developed in the regular public school curricula.

The same list of questions was sent out to a list of school men from whom replies were returned. I have the following criticisms and suggestions to make:

The employer complains that the schools are not doing what they should, and the schools seem to have been standing off one side and saying, "What is it that you want?" Just as long as we remain that way we will not get anything of any particular service. It must become the specific work of somebody to make up a program. I suggest that it is the work of the public school people to put up that program of action and bring it to you employers for your assistance and help and criticism.

I have been to employers a number of times myself and asked this question: "What is it that we can do for you?" I have never gotten ahead that way. I have come to them with a specific program "What do you think of doing this, that, or the other thing?" and I have generally gotten assistance. It seems to me that that is the line along to progress.

In answer to No. 2 there is rather an indefinite notion on the part of the schools as to how they can be effective in giving the education you need. But I think they make a more creditable showing in their replies than the employers do in theirs. For this reason, if you analyze those replies you will find that only twenty per cent. of the replies from the employers had any specific agency to suggest which would produce results; whereas eighty per cent. of the school men put their finger on some specific agency, whether a good or bad or sufficient agency is the question. The idea is a little bit clearer. The method of approach is a little bit more definite as expressed by the schoolman's replies to these questions than it is by the employer's replies.

I have one or two other genreal comments to make on this report: It is certainly encouraging to find a body of men such as this organiztion represents giving their attention to this problem and looking for co-operation from the constituted school authorities.

We feel that proper industrial vocational education must be given to a very large extent in industry. We feel that probably as industry is now organized the preliminary stages of this education can be given, under the proper direction and in the proper environment, in some regularly constituted school.

Historically all vocational education which has been attempted in schools from the training of the clergyman, the doctor, the lawyer, the engineer, or the dentist, historically, that vocational education has undertaken only in the schoolroom the preliminary stages. The more advanced stage, the more advanced phases have been given in the vocation itself. The program which I would like to see undertaken in this State is a program where the preliminary training up to the advantageous point of entrance into an industry will be given in special schools, and then by co-operation with industry when the pupil has acquired something which he can give, which is of value, let that education be continued in continuation schools or in evening schools.

I thank you for the opportunity to speak to this organization, and I pledge whatever co-operation the State Board of the Commonwealth of Massachusetts can give in assisting you to a program; a program of action is what you need. (Applause).

THE PRESIDENT: Ladies and gentlemen, I believe that we all are very much obliged to Dr. Small for the careful, detailed consideration which he has given to our committee report and still more for the very definite requirements which he has formulated to bring about the co-operation necessary for the successful advance of our industrial organization.

I now call on Mr. E. H. Fish, of the Norton and Norton Grinding Companies for his discussion. (Applause.)

MR. E. H. FISH (of the Norton and Norton Grinding Companies): Mr. Chairman, ladies and gentlemen, I prepared a fifteen-minute talk on this subject, but the discussion has taken a little different turn, so I think I will talk in a rambling manner about some of the things which are before us.

The suggestion which Mr. Rohrer made, that more of us ought to be on the school boards is a very good suggestion except to those of you who have been on. (Laughter.) I think those of you who have been on boards of education or have had contact with them will agree with me on the futility of being on the boards as they are now conducted. I do not know how things work out in the West. They tell me they are more liberal and there is less of politics than in the East.

This morning's local paper had headlines half way across the sheet bearing on a discussion going on here in town as to whether a certain individual in our School Committee shall dominate or whether certain other individuals in the schools shall be on the job any longer or whether they shall be turned out. That sort of thing is coming up here in the East all the time.

Our school boards are mistaking buildings, school teachers and text-books for schools. None of these things constitute a school at all. You can have a modern expensive school building, and you can locate it on land that belongs to some friend of some friend of a man that is on the school board, but that does not constitute a school. And you can pick out the cousin of the uncle of the president of a school committee or any other man that has a political pull, and put him in charge of the school, or make him an instructor, and that does not constitute a school. You can buy your books of Mr. Wiley down here, or you can buy of someone else, and that does not constitute a school, but that is with what the school boards concern themselves.

The value of a school depends on the teachers, on what they teach and how they teach it. That is not a tangible thing, and the school committee cannot get at it very readily. So you have to put up with teachers, some of whom are incompetent, because you cannot find a definition of incompetency. It is impossible to define incompetency in a school teacher. If you attempt it you will find as many different ideas as there are people, just as in defining a machinist, you will get as many different opinions as it is possible to imagine. And the school boards would be about as likely to agree as, I imagine, the machinists in the different parts of the country would.

You have your teachers there, no matter how they were selected, and you cannot get rid of them except by enduring a muckraking from all quarters. The reasons why this is so difficult, or at least one of the reasons, is that the professional educator and the business man do not talk the same language, they do not understand each other. If one of them gets up here in the meeting and talks about a thing and then you say the same thing in your language, then you will both go away and think you have disagreed with each other. (Laughter.) The professional educators simply talk in terms of a little longer words.

I had a little experience in that direction here only two or three years ago when a local society of educators asked me to gave a list of seventy-eight different operations that were used by machinists.

The thought that comes to me is of the difficulty of getting machinists and employers in different parts of the country to agree to any definition of a machinist. Now Mr. Allen is a man of strong personality, and I have no doubt but that if he were located here in Worcester, and were to go around among the trades men, he could find over a hundred machinists who would agree, perhaps not to all of these things, but to some particular thing, just through his personality.

There are many things that depend on personality and the presence of the person who presents them; but I question whether it is possible for the average sort of man who goes into school work to be able to put that thing over on his own personality, but I think it is the thing he would have to go on. (Applause.)

THE PRESIDENT: Perhaps the attitude of superintendents of schools in keeping their boards busy with immaterial details and doing the important work themselves is very largely the cause of the schools' being a great deal better than they might be considering that they are controlled by boards of politicians. (Laughter.) But I am inclined to think that if really big men would be willing to serve on the Boards of Education they would in most cases have no difficulty in controlling the superintendents of schools.

Mr. Fish undoubtedly has laid his finger on the weak point of such co-operation between industrial and public educational systems, that the Boards of Education are dominated to a considerable extent by politicians, that is, men who make politics their business. But I believe I can throw back on you the same question which Mr. Rohrer raised: How many of you have really devoted any appreciable time to improving the condition of the management of your municipality or have devoted any time at all to it, except perhaps to find fault within your own circle where your criticism could not possibly have any beneficial effect, and once a year at election to decide by your vote between the one candidate and the other, both of them being men to whom you probably would not entrust a dollar of your own property? (Laughter.) There is where you can do something by taking greater interest.

Now I call upon Dr. J. H. Haaren of the schools of the City of New York.

Dr. J. H. Haaren (Associate Superintendent of New York City Schools): Mr. Chairman, ladies and gentlemen, as a person who has been engaged in the work of schools for forty-two years, perhaps I ought not to take any part in this discussion, particularly if I were to consider the trend the discussion has taken.

I am from a little city that is about 41 degrees and some minutes north lattitude, and which has nearly 800,000 pupils attending school. First, I want to assure you that politics do not control the schools of that city. I want to assure you that the initiative in recommendations does not come from politics in the appointment of teachers or in the adoption of text-books, because it all comes from our professional body, the Board of Superintendents.

I want further to assure you that if any superintendent tolerates an incompetent principal, or if any principal tolerates an incompetent teacher, the fault is not with the system, but with some man or woman who will not stand up on his or her prerogative and insist upon the removal of that person. You do not need, in order to define incompetency, to run through a category of defects, but all that you have to do is to make your general statement and prove one single defect. We are not without incompetent teachers and principals in the City of New York, for ours is a human institution, and we also have some people that are afraid to do things. It is difficult to discover what they are afraid of, for they are secure in their tenure, and they have no reason to be afraid, but that is the way they are built.

Furthermore, I want to call your attention to the fact that while you may know of a number of people who ought to be removed, I wonder if you have an equal knowledge of the fact for which you think they ought to be removed, or are you simply hearing talk about them?

The schools are peculiar institutions,—I am talking in rather a free discussion here, and it is so much easier to create a scandal than it is to hush one up; and the peculiarity of our institutions is that those who are influenced by the scandal are children. Many teachers have been dismissed for apparently trifling offenses merely because it was the scheme approved by the committee, who knew that there were serious charges that ought not to be published and that would get to the children were they brought out. We know from our experience that this is true in many instances.

This little city last September gave me and a colleague of mine in this particular field authority to override the rules of the Board of Education in order to carry through an experiment. Any rule of the Board that might interfere with us might be suspended. Of course, we could not exceed or set aside the Charter, but every rule that was made by the Board of Education which might stand in the way of the encouragement of this scheme of part time and co-operative and continuation work on the one hand and vocational and prevocational work on the other, was suspended by the Board of Education itself. That shows how much the Board of Education interferes with a certain work.

Thereupon there was put at the disposition of this committee, or these two gentlemen, a fund amounting to $236,500, all that to be expended, of course, in accordance with certain law safeguards. Nevertheless, so far as I am concerned, there was appointment of teachers—I am seeking teachers and substitutes—but I hadn't a suggestion from a single member of the School Board from the President down as to who should get these places.

It seems to me,—and I am speaking for the school men there,—if we are not having our rights in the Board, it is because we do not assert them. I have had no experience with elective boards. Our Board of Education is an appointive Board. I want to say to the school men that are members of boards, as business men, should insist that school men stand up and fight their boards if necessary, and fight their committees.

Now, Mr. Chairman, last September the Board of Education of the City of New York inaugurated a new line of work. It had had its continuation classes, its evening trade classes, its classes for English covering the same things and points that the Chairman outlined at the beginning of the meeting, and it had its vocational schools. It had had its trade schools, so-called, and it inaugurated about one year ago a new plan of pre-vocational work, in which the course was differentiated in the last two years of the seven and eight-year course.

This plan was tried in two schools only, one a school of about three thousand children. The other was a girls' school in the outskirts of the Borough of Brooklyn, on the border of the Borough of Queens. This same line of work was extended to five additional schools last Fall, and the pupils there were given an option of a number of trade processes in each school.

These are what were provided for the boys: A rudimentary machine shop, a sheet metal shop, a plumbing shop, a printing shop, a sign painting shop, a mechanical drawing room, and so forth. For the girls there were, of course, the home-keeping courses, machine operating, regular sewing instruction of various kinds, and things of that sort laid out in such a way that every one of the pupils would have a chance to spend time on productive work for a period of eight to ten weeks before proceeding to something else. We do not intend teaching trades in the elementary schools. I am glad Dr. Small hinted at the undesirability of determining the future of these children. We ought to give them an acquaintance with trade processes, but we ought not to expect even after very careful deliberation definite selection of careers in many cases; we ought not to say to the pupil, "You shall do this," or "You shall have to enter here." We ought to give the children a knowledge of fundamental things, and we ought to have a sort of testing process so when a machinist is mentioned, the child may have an idea of what a machinist is.

So far as part time work is concerned, I had the great benefit of the advice of Dean Schneider, the father of this co-operative plan. Our trouble was two-fold. In the first place, the employers were hard to reach. Second, the school men were hard to reach too. This was our cue to get the high school principals interested in our proposition. There are twenty odd high schools in the City of New York. I went to various principals and asked them to name certain of the regular teachers who would be good men to act as what we call co-ordinators. The co-ordinator was to be a teacher who had a business sense. The naming of such a teacher by the principal placed a responsibility for the success of the scheme on the school. Then we went out to various persons; Dean Schneider and Mr. Henderschott helped us a great deal. We had to go to Cincinnati to see a scheme in operation. There is one gentleman here who had something to do with the way we started this co-operative plan for the girls. He is at the head of a very large mail-order house, employing a lot of girls. This house allowed us to send them girls who spent one week in the shop and the following week in the school. In the week in the school, they took up many studies which would be of service in their work. In getting co-operation we insisted on these things: That our pupils should not be exploited; the employer might try to get as much out of them as possible from the business standpoint, but we insisted that the educational side was a very important thing for them. When the pupils had learned the processes and gone through one portion of whatever business they were undertaking, they were transferred, and had a chance to continue on through the work as laid out for them. And we found very good co-operation in this regard. We impressed this upon the pupils, that whatever their feelings, they were to take their places as they were moved along in the various processes of that industry.

Then we got into the other businesses. We got into the linotype industry. We got into salesmanship. Two or three of the large publishing houses also have large offices, and they have taken on our youngsters. We insist in every line of work which we enter that there shall be a future for our boys and girls. We do not want to increase the number of low salaried people, but we insist that a mere worker, not a foreman or superintendent, shall be able to earn a fair living wage, which would be $18 or $20 a week in the case of the girls, and $25 a week in the case of the boys; and we will not co-operate with any industry that promises anything less.

We had, for a beginning, ten of these pairs in one establishment. We had or now have about 140 pairs, that is 280 of boys and girls who are out alternating. They earn from $5 to $10 a week. I have unsolicited testimonials, that is, lots of commendatory letters that are sent to the co-ordinators. For instance, one establishment had not taken an apprentice for twenty years, it could not stop to train its own men, it took on only skilled men. A few pairs of our boys were taken by way of a beginning at $5 a week, and now some of them are getting $10.

One other establishment I know of, if I would mention its name you would recognize it at once, began with two boys in the commercial end and two boys in the machine shop. They gave the boys $5 a week; one of the boys was better than his mate, and he was raised to $9 a week, and as he is going to graduate from the Commercial High School in a week or two, that boy is going to be taken on in regular employ. The Executive in that office rose from the ranks, and we look for this boy to rise from the ranks, and to work himself up out of the position which he has now taken.

One of the difficulties that we have to overcome in this matter is the subject of the Regent's examinations and the Regent's counts that the boys and girls have to have in order to graduate. Those of you who are not New York Staters may not understand what we mean by our Regent's count. It is something peculiar to New York, I think, and it is held up very rigidly. But I have taken this matter up with the Regents, and the Commissioner, Dr. Finley, is in hearty sympathy with our efforts. They are going to do all they can to help us in passing the boys along who are making good in their work. So, therefore, you will see that the extension of this whole line of work has been laid upon the shoulders of two people, and it has been undertaken in a spirit of an experiment with a definite idea. And the expenditure has been quite some for the carrying on of this work even as an experiment. One of the results will be the inaugurating of a training which has long been neglected. My part of the work will cost about $76,000 at the end of the year. This is largely made up of the salaries of teachers, because they are charged to my account at the regular salary, and I am willing for the time being that this shall be done. I think that eventually this work will enable us to get along with fewer teachers. One teacher can manage, I think, instead of one hundred—in the sense that it is one hundred different pupils during the day, or all through the periods of that day—will be able to take two hundred, because one hundred will be in the shop and another one hundred will be in the school at the various times on alternate weeks. Now then, we have not been able to have what we could call co-operative classes for the reason that we had to work with the co-operation that was offered us. We tried to adjust our problem to the situation as it has been presented to us. We have arranged it so that if they so desire these people may come back to us on a part time schedule for specific and special instruction after they have gone into industry.

Now, as I said before, it takes a great deal of time and a great deal of talk to convince the employers. We deal with large firms that have their offices in New York and their factories perhaps in the outlying sections. Therefore, in certain industries, you know, we have only the repair shops, because rentals are pretty high in the City of New York, and we cannot co-operate as well as perhaps could be done in a smaller place in which there was a well conducted industry in which you could have a regular class. But I hope before very long that even this obstacle will be pretty well overcome in the city and we will go ahead with the co-operative work which we hope will prove of benefit, not only to the employer, but to the school.

I have not gone into the question of the training in the various places, for that is all charted out in syllabus form and there will be just as definite instruction in the work of the industry as there is in the school work.

I want to say further, that the attendance in the shop is known, it is taken by the co-ordinator who attends at all of these places of employment and as careful record is kept of the shop attendance as for the school.

I thank you for the attention you have given, and I hope I will have an opportunity to explain our co-operative and continuation schemes at greater length some other time. (Applause.)

THE PRESIDENT: I now call upon Miss Kennard of the Department Store Educational Association of New York for her views.

MISS BEULAH E. KENNARD (of the Department Store Education Association, New York City): Mr. President, As we are considering the subject of public education I want to approach it from the point of the Board of Education because previous to my work in New York I was for more than two years a member of the Pittsburgh Board of Public Education which was then reorganizing the public school system and we knew what Dr. Steinmetz meant when he said yesterday morning that we must have a 20th Century school system and not a 19th or possibly an 18th Century one. As a member of that Board I also had an opportunity to see the wisdom of Dr. Haaren's points and especially his objection to too early specialization which the putting of trade training into the elementary schools would mean. On the other hand we should be careful in our teaching of English, arithmetic and geography to lay a good foundation for a business life, but the weakness which many of our people show—in arithmetic for example—may come from the fact that they left school before they reached the grade in which percentage, discounts or other necessary problems were given.

The Department Store Education Association with which I am now connected made a thorough survey of two stores and a partial survey of nine others with the following results: Out of 448 girls 204 had graduated from the Grammar School and 244, or over fifty per cent., had not graduated. Many of these had not reached the seventh grade.

But the most important question in education, from the standpoint of industry, is the preparation it gives for the work to be done. A very definite problem is before us; at least in the department stores and that is as to the nature of the job. We have been trying to standardize our boys and girls as far as this particular occupation is concerned, yet I could find practically no standard in the job itself, and therefore no goal toward which we could work in training them for salesmanship.

When our Association started in this work in New York City, we determined not simply to try to get for a few girls a better preparation for their particular jobs, but to raise the standard of salesmanship in order that it might be a vocation into which the high school girl and the really trained girl could go and expect this higher wage of which Dr. Haaren has spoken but which is not attainable unless the girls gain a higher efficiency than they have at present.

When outlining our course we could find no definite standards, therefore our first task was to see what this job of salesmanship was. After making a rough schedule of the things we felt ought to be included in a course under such heads as stock, salesmanship, merchandise, commercial ethics and system, we went into the store with the purpose of seeing what was contained under these general heads. In order to make a consistent study we then found that we must get homogeneous groups with which to work. Therefore we asked the store to supply that which was a very difficult thing to supply, the attendance in our classes of all the members of certain departments, including those that were experienced and able saleswomen as well as those who were very much younger. As it happened in this last case, we were able to obtain almost exclusively the experienced saleswomen, because it was the month of February and they were using only their permanent forces, and we asked that they be sent up to us for a short time, dividing each department of seven, which we chose, into three groups. That meant that one-third of the department went to the school for an hour and a half each morning of the week, or two mornings a week for each girl and then after a short time those who were not interested in the work and did not care to go on with it would be permitted to withdraw. There were other difficulties which came along. For instance, Easter selling, which made it necessary for a good many to withdraw even though they did not want to.

I chose departments, with the co-operation of the store, that had a great deal in common in the matter of stock, and we were able, therefore, to go into subjects that were of general interest to them. We did not offer the girls immediate advancement, either in wages or in position, we could not do it as we were dealing with people who already had the highest wage paid in the department, and unless the efficiency of the whole department could be raised above its present level, the store could not afford to pay a higher wage to these girls. But they were going into it with the purpose of opening up the job, really finding out how the higher type of salesmanship could be secured and then helping to secure it; and I think that the girls have entered into the spirit of the experiment much more than we could have expected them to. We aroused the latent imagination in all of them, because there is nothing that is more deadly for efficiency than the monotony of a daily round that has no interest back of it. For ourselves the study of these departments has been most fascinating.

We went into a department first and classified the stock. The saleswomen had never heard of such a thing. From that we went back into the processes and materials in general, and to the stock which the girls were handling in their own departments. We made departmental outlines and departmental analyses of the things that they were doing in their daily work, always going from the concrete example to the general study of the question so that they would be able to follow us into the larger field with a definite connection, and as a result we find that they have been making use of this knowledge in their departments.

Of course, taking these groups as we did from seven or eight departments, we knew that they had some things in common, but others that were peculiar to the individual department, and so when we gave our tests, we gave about seven at one time. Each group of two or three girls had a different set of questions to answer, along the same general lines, but differing upon the points of departmental stock.

The proposition of selling, and the knowledge of customers, which are matters of general interest, could be taken up with the class as a whole; but a good deal of this work had to be done with small groups. They were promised at the end of the course a certificate, to be based on the results of the work combined with the store's endorsement as to their sales; and no girl who fell below a certain standard in her salesmanship was to receive her certificate, no matter how good a record she might make in the class. However, we were pretty safe in making this statement, having had the permanent corps who were considered good saleswomen before we started.

About two weeks ago we had the certification of our first group, forty-four saleswomen, who had passed the tests for interest and general ability as well as for direct knowledge of salesmanship as applied to the individual cases. We made these tests before we had their sales records, and then checked up with their sales records. It was most interesting to find how closely the records corresponded in most cases. We found, as was stated last night at the Round Table, that the good students were usually the good saleswomen, although in a few cases there were differences, which could usually be accounted for either by a lack of interest in the class, by poor health, or something of that kind which had affected their sales.

We recognize that this work should be co-ordinated with the public schools, that the public schools must lay the foundation and as our public schools in New York City are taking up co-operative work by sending the girls from the high school into the stores, we have been very anxious to get close to the school authorities. We have talked with Dr. Haaren a number of times, and we have several members of the School Board on our committees. We have the principals of the two high schools which are doing this co-operative work on our Educational Committee, and they have endorsed our plans and methods.

We have now prepared a plan which is to be tried out before a committee of the Board of Education and which has already received the endorsement of several members. We shall work with the Vocational Committee of the board and hope to be a sort of laboratory in the store for making these standards for the high school girls who are going in. If we send boys and girls from our schools into the stores, we must have some general analysis or there must be some such co-operative work in order that we may know when the salesmanship is good or bad. A group of boys was sent into one store in New York where the salesmanship has been criticised very severely. A store of that kind cannot be a good place to learn salesmanship and it is impossible for the schools to check up all of the stores in New York unless they have some such co-operative plan. But we hope that we may be able to make the connection between the schools and some of our larger stores, to make a plan that will work to advantage both ways. (Applause.)

THE PRESIDENT: I will call on Mr. Atkin, of the Cash Register Company.

MR. F. W. ATKIN (The National Cash Register Company): Mr. Chairman, ladies and gentlemen, under the head of Public Education we, of The National Cash Register Company, have been deeply interested in the remarks of the gentleman from New York.

The questions of co-operation *with* the city schools and co-operation *from* the city schools have been interesting to us, because for a year we have been debating these very questions. We have been wondering which would be the best course to pursue to get the most efficient men from among our apprentices.

The first thing we had to consider, after having spent all of last summer in the study of the question, was whether we would have in our factory a corporation school or whether we would co-operate with the city schools in the education of our apprentices.

It was our opinion that a school of our own, which might be conducted along the lines best suited to our individual institution, would have been the best, but here entered into the question a big humanitarian thought. If we, as a large corporation, were to have our own school, what would the smaller factories in our city do? What opportunities would be presented to the boy in the smaller industries, or those that could not afford to have their own schools?

With this thought in mind, the Education Committee of The National Cash Register Company called together men from various other industries in the City of Dayton for a discussion of the advisability of starting in Dayton a co-operative high school.

At a subsequent meeting of the Board of Education, the plan was outlined to them. We found there a group of men who had no idea of politics, when it came to a consideration of education in our city. We found a superintendent who was broad-gauged in every respect. We found men who were anxious to take up this question of co-operative training for apprentices, and we found absolutely no difficulty in getting complete co-operation from the public schools of Dayton.

It was decided, as you will notice in column No. 3 on Bulletin No. 1 that a certain plan would be necessary for the admission of boys into this scheme. I will not discuss that; the Bulletin explains it fully. Columns Nos. 4 and 5 provide two alternatives which the boy will have at a certain period in the scheme. Explanation will not be necessary here, but let me emphasize the fact that the broad-minded men amongst the educators in our city have made it possible for us to go ahead with this scheme, which has been in force for almost a year.

Dean Schneider was naturally the father of the Dayton scheme. He is the originator of the co-operative work amongst schools throughout the United States, as I understand it, and in considering the Dayton plan, the Dean was called in. We had some very interesting and instructive conferences with him relative to the matter. At all times we sought his advice, which was freely given, in the matter of arranging our plans for the operation of this course, both in the school and in the factory.

You will notice that Bulletin No. 2 explains in detail the scheme referred to by the speaker from New York. This scheme is in use in Dayton at the plant of The National Cash Register Company. It is a shop syllabus, an absolute plan, which provides that the boy must receive at certain stages of the school work certain instruction in the shop. It is a course definitely laid down which the boy must follow, and he is carefully checked by the supervisor of apprentices at the plant. The foremen of the various departments have these plans posted in their offices, and they also are carefully checked in the matter.

The supervisor of apprentices gives special attention to the progress the boy is making in the various departments, and should a foreman fail in any way to take this boy through the course outlined in the shop plan he is called to task by the Education Committee.

The apprentices are often called before the Education Committee. They are encouraged to tell their troubles, both at the school and in the factory, and in these meetings we are able to find out many things which are of value to us in assisting the boys. The foremen and heads of departments are also called into the meetings for the purpose of discussing any faults that may have developed in the plans.

You will find in Bulletin No. 6 a co-ordinating class for co-operative apprentices. Last night, at the Round Table discussion, the question, "What to do with the sixth day" was asked. We have been able to solve that problem very easily. For five days each week the apprentices attend school. On the sixth day, Saturday morning, we bring them into the factory and give them a final round-up on their week's work. All the boys from The National Cash Register Company are expected to be present at these meetings. We also encourage any other boys who are attending the co-operative high school to be present, should they desire. The boys are put into the hands of various members of the factory organization, and given a review of the past week's work at the factory, as well as at the school, in order that the two may be closely co-ordinated. They may dissemble and then assemble a lathe for the boys, having them around in a group rather than seated at a distance. This will be carried on for probably two or three Saturday mornings, or until the machine has been torn down and completely rebuilt, so that the boys may have a thorough insight into its construction. On another occasion they may be taken to the foundry, where one of our expert foundrymen will make a mould, showing them the intricacies of this class of work. This merely illustrates to you some of the things we are doing for the boys on Saturday morning. It is our intention to have the Saturday morning meetings cover various phases of their school and factory experiences. The whole scheme is to co-ordinate the work of the shop with that of the school.

The next thought and the last is the outlet. Two things are wanted from our apprentices. First, and this will apply to the bulk of them, we desire skilled men in the trades. We want men who are more highly skilled than they could possibly have been had they gone only to the sixth or seventh grade of school and then entered an apprenticeship.

Second, we know that while the greater number of these apprentices will seek the trades, there will be a certain percentage of the boys who will have higher ambitions. You will notice, by closely following this plan, that on Bulletin No. 1 we have provided in column No. 3 that any boy who has gone through the first two years of co-operative work, which are the equivalent of a third and fourth year of high school work, will have prepared himself to enter a university.

In the first place, a boy to enter the co-operative plan must have finished his second year of high school work, and at the end of the co-operative term he will have earned sixteen high school credits, or a sufficient number to admit him to the university. These boys will be sent to the University of Cincinnati, and we will again co-operate throughout the five years of the university course. The young men will be employed at our factory, during which time they will receive a training which should fit them to become executives, salesmen, master mechanics, supervisors, etc. It is our hope that we will get from our co-operative high school boys a number of these young men who will have an ambition to enter the university.

The whole thing amounts to just this. Here are a lot of boys who could not go to a university and here again are another lot who would indiscriminately get into the trades and would, no doubt, be used to the advantage of a great many employers. These two groups of boys are now kept absolutely to a syllabus of work and study, which should mould them into useful men for the future. They are paid while they are working, and hence are in a position to finance themselves through the period of high school training. At the end of that period, they know that they can go to the university and that we will still co-operate, thus enabling them to pay their way through the university.

This is the Dayton plan of co-operative education. We will be glad to go further into details with anyone who may be interested. (Applause).

THE PRESIDENT: I throw the discussion of the question of Public Education open to the meeting at large, and would like to hear opinions expressed from the floor.

MR. NORMAN COLLYER (Of the Southern Pacific Company, San Francisco, California): Mr. Fish touched upon the influence of politics on education in the West. It is true that many of our school officers hold elective positions; and Mr. Thomas appreciates the difficulty that a railroad has in dealing with political affairs, for the reason that a railroad company's plant is so strung out over the country that as soon as it adopts a uniform policy and proceeds to put it into effect in the various communities which it serves, the charge is at once made that it runs a machine. The position of the carriers with respect to public questions is therefore one of peculiar delicacy.

I come here representing those corporate interests which I count it my good fortune in a humble capacity to serve, but I hold a brief for the teachers. A good many years ago the purchasing agent of a railroad, when he wanted to buy some rails, would go to the manufacturer and would say, "I want to get some rails." The manufacturer would reply, "Yes, what kind of rails?" "Well, I want some good steel rails, first-class, weighing 62 lbs to the yard," and the order would be placed on that basis. And then after the rails were laid it might happen that there would be a wreck due to a broken rail, and the superintendent would go out and look at the rail and see the manufacturer's stamp on it, and would say, "We ought not to buy any more of those rails, this is the second time that I have seen one of them broken." We didn't make any real progress in reducing the rail failures until we began to keep statistics of the accidents which were due to rail failures, and the broken rails which were discovered in the track, which did not cause accidents, to make chemical analyses of the composition of the steel rails which failed to classify the nature of the fracture, and to send our chemists and our metallurgists into the plants of the manufacturers to inquire into the methods of making rails and finding out the best ways. Then as a final result we sent our inspectors to the factories to see that we received exactly the kind of rail that we ordered. When we did that on the Southern Pacific System and the Union Pacific System, we made such a tremendous advance in the reduction of rail failures that I would not dare to quote it without being fortified with actual figures.

Applying this analogy to the public schools, we call upon the educators to provide us with young men and young women, and we say we want them to be good efficient employes, but we are unable to tell them definitely exactly the composition of the education which they are to receive. To my confusion I own that my own company does not know what it needs in the way of education. But if I have any influence with its management, it is going to try to find out.

In San Francisco we have an organization somewhat similar to that mentioned by Miss Fox, The Commonwealth Club, which is composed of the economists and business men and professional men and educators, who meet and discuss various problems relating to the commonwealth, and I think that through co-operation of that kind, through periodical meetings or dinners or luncheons we can get the best results. I thank you. (Applause).

MR. E. G. ALLEN (The Cass Technical School): Mr. Chairman, may I have just one minute? I have put into your hands a plan of education designed to be a standard for the education of mechanics.

We are putting this outline up to the man in the shop who supposes that he has learned his trade, as a standard for him. Now Mr. Fish used the words "put it over." I am not trying to "put it over;" but to avoid any personality, to avoid anything like salesmanship, these outlines were not placed in the hands of the mechanics personally, they were given to the factory employment department and taken into the factory and sent back to us by the men after deliberate consideration. We do not claim that we have here an outline which will make a mechanic absolutely what you want in any department. Will you kindly go over the outline with this thing in mind: If the combination of the school and the factory can give to the mechanic the substance of what is in that outline, can he reasonably adjust himself to the conditions that he will find?

THE PRESIDENT: Mr. Corbin, the Chairman of our Committee, has arrived since we have entered upon our open discussion, but we would be glad to hear from him now.

MR. ARTHUR E. CORBIN (The Packard Motor Car Company): Mr. President, I feel diffident in saying anything further, because I only arrived here a few moments ago,—just in time to hear part of the able talk about the splendid system at The National Cash Register Company.

I know that the work which this Committee has undertaken has not been appreciated by manufacturers in the past years, and maybe the importance of the investigations which we have just barely started and which are simply tremendous in importance, are not appreciated either. I only wish that the enormous pressure under which all of us are working could be relieved enough to enable us to devote more of our time to this. And the one thing that is going to bring this about is the necessity for an entire reorganization of our point of view, due to the fact that the conditions that were good enough are no longer good enough for factories in American industries. We have developed methods of manufacture to a point where today they are far ahead of our methods of handling the much more delicate part of our business, the personalities of the employes. We ourselves would be much further ahead in our businesses, if we had known what we were going to undertake in the days of our boyhood and girlhood and could have gone at that undertaking in a scientific way.

The big point that I want to give you is simply to tell you the enormous impression this has made upon me; not what your working committee has been able to do in the past year, but the importance of this subject to every one of you gentlemen. The only way to do is to go at it in a business-like way, because there has never been anything in the mechanical or business world for which you could not find a solution if you got the large majority of the thinking minds of the special industry or of the special circle concentrated upon it.

There are many of you that have developed fine organizations; there are many of you that have carried them on with excellent results; but it is pretty hard for us humans to lay a foundation when we do not get quick results. It is so hard for us to see skill that is hidden, unless we can study something visual like a machine rather than working with the possibilities in a man. But the changes we are making from day to day when we cannot see immediate results of our great thought, the result of co-operating work may by some slight change of construction bring about a result we little dreamed of. All this calls for a very careful study of facts that have only come within our ken within the last decade. It calls for a careful study of the application of psychology.

And if there is only one thing that the work of this Committee can bring about let it be your co-operation with the efforts which the teachers in your locality are honestly making. Every one of them, with very few exceptions, feels as he goes along, as if he were fighting cotton batting. and the way we feel towards this subject is almost as undefendable as pathetic. We can never get the scientific results, we never can get any proved plan for supplying industry, through the public schools, with fully prepared employes until we simply get out and get our minds all working on the same subject. (Applause.)

Mr. A. L. Rohrer: May I just add one comment to Mr. Fish's remarks? I noted, and I think most of us did, the hopelessness in his remarks. He rather inferred that to his mind it was a hopeless task to try to do anything as members of boards of education, as it has often been said that in New England we have politicians on these boards. If that is entirely so, the boards are properly denounced, but I do not believe that the task is so entirely hopeless.

I know something in a general way of the magnificent work done by the Norton Companies, and of what they have accomplished. Things that apparently seemed hopeless at first have been overcome through constant attention and effort. I think if Mr. Fish would present to the members of the board of his company those facts, he and you would forget that anything was hopeless and you would have very little ground to stand on. I know from the company that I represent, The General Electric Company, if we were to sit down and say, "Here is a task that is hopeless" and then dismiss the matter from our minds, we would never get very far, but we keep at it eternally until we have in a measure succeeded in finding a remedy for certain situations. While we have discovered some things of advantage and have put them to general practice, and while we have not discovered some of the remedies that we hoped to discover, yet we feel that we are making progress. I did not want you to go away with Mr. Fish's idea, if I got it right, that the task was entirely hopeless.

Mr. E. H. Fish (of the Norton and Norton Grinding Companies): I do not know of anything in this world that I would wish to consider as being hopeless. I know that what I would like to do would be to arouse people from their apathy, get them to realize all the conditions that we are confronted with in public school education and then see if something could not be done in the way of a remedy; possibly along the line that I suggested, possibly in some other line which I have not suggested.

But the thing that I wish to suggest in place of this political control that we seem to be having, is that more authority be placed in the hands of the school superintendents.

Dr. Haaren showed you that in New York City they had cut loose, and were working practically alone, that they had given him a free hand and he is accomplishing results.

Now, I believe that the thing to do is to get men who are willing to take responsibility, who have the power of discretion, to take charge of schools, and give them authority and hold them responsible for the results.

There is one thing certain and that is that you must have charity about results for some little time; because in any kind of school work, corporation school or any other, no one can show results immediately. It is going to take time, and in the meantime you must rely on the ability of the man whom you have selected as the right man, and allow him to go ahead and do things. Then await results.

REV. J. L. SOULE (Worcester, Massachusetts): I do not know that I have any right to speak upon this floor. I came in this morning as a citizen of Worcester, deeply interested in this subject. I was very cordially received and given a badge, on the strength of which I want to say a few words.

I think the real ground on which I might speak is the fact that for three years I have been a member of the School Committee of this City, and I understand very thoroughly the discouragement which Mr. Fish has felt. If you gentlemen will read the leading article in the Worcester *Telegram* this morning, the first article on the first page, you will see perhaps what is in the minds of a great many, and what the readers in Worcester are considering as one of the burning issues of the times. It is simply a fight over political personalities. We have thirty members of the School Board out here in Worcester which perhaps causes some of the difficulties. I am sorry to admit that we are so benighted, but you ought to know that fact in connection with the feelings which are expressed in that paper.

Now, gentlemen, there are two points I would like to make upon this subject: The first is, that if you want to bring your officials and your teachers in the schools into touch and sympathy with the plan of the business corporation school, you must have publicity and let the people, the fathers and mothers who are anxious for the future welfare of their children, know what has been done and what can be done.

It is not my place to tell you how that publicity can be reached, but if this plan that is going on in Dayton could be brought before the fathers of Worcester who have sons for whom they are anxious, if you could get into the minds of the fathers of this city who are the voters, and who will ultimately control the management and the personality of our schools, if you can make clear the practical results that are being accomplished, I believe that you could make progress in this direction.

May I suggest this one thing: I am the pastor of a small church that is made up very largely of fathers and mothers who are working people, and whose children must look forward to work. For the last two or three years I have found one of the most interesting and stimulating parts of my service, being the attempt, from the point of view of pastor, to do a little vocational guidance, to talk with fathers and mothers about their children, to talk with the boys and girls about what they want to be; to try in a personal way to guide and direct. Gentlemen, I believe that the church, the pastor, the priest, the rabbi, may become intermediaries between the corporation school and the public educational system. I believe that there is a power latent in these men who are trying to guide the moral and religious progress of our boys and girls. I believe there is a power there which ought to be laid hold upon and directed along the line which you are discussing here this morning. (Applause.)

H. J. TILY (of Strawbridge & Clothier, Philadelphia): Mr. Chairman, ladies and gentlemen, I want to make a little appeal at this time. It is right in line, I believe, with the topic assigned for discussion this morning—Public Education. The appeal is for help to make this Association grow. I do not believe that we have today a sufficiently large membership to properly influence the gentlemen who have spoken to us, and who represent public educational work.

The National Association of Corporation Schools represents a certain number of corporations who are doing educational work which they believe to have a business significance. We have heard a great deal as to the apprenticeship system. We have heard a great deal about boys and girls, but those of us who have been identified with institutions that have been in existence twenty-five, forty, fifty or sixty years have on our pay-rolls, men and women who are not apprentices, except as we make them apprentices, except as we observe the newer idea in business, which is that the institution to be able to enter the field of competition must have educated men and women as workers. Much of this education must be given by this company, and given, therefore, not to juvenile helpers alone, but to everyone in the establishment.

Now I confess to a certain feeling of disappointment in this convention up to date. I want to meet in future conventions a greater number of men who are interested in the problem which confronts me in my business. This association can be of no use to me in proportion as I help to make it of use to you.

I want to meet more men, I want to be able to exchange opinions with a larger group of men who are working in different sections of the country; I am sure that is exactly what you want to do. When we get greater strength, we can get rid of this feeling of hopelessness expressed here. We can get rid of indefinite answers to questionaires. We can send out from our companies paid investigators, who will prepare for us for discussion at our conventions valuable and interesting answers to questions on the experiences of many men in many lines of work. These experiences can be obtained by personal interviews. We want, of course, and every company wants the young men and the young women who come into our offices to have a proper foundation training. But we want right now to change the character of the men and women who are already in our offices. This is something that we need in our business right now. We have men and women with us who know our business. They have certain technical knowledge, they are valuable, and we cannot afford to get rid of them. We want to make them more valuable, and we can do that only by helping them to fill out in the particulars in which they are lacking. So I say let us help change the character of these people, boys and girls, men and women, who are now members of our staff, who are already interested in our work and are acquainted with it, and then we can knock at the doors of Boards of Education, and have a little more authority. It is selfish, unquestionably, first, but it is altruistic afterwards, this idea of the general education of those engaged in industry. Its object is selfish, we are educating for ourselves, and we want our neighbors to educate their employes, because we are losing those whom we educate to the concerns next door, who are not educating their people. We want the man next door to us, who is trading on the people we have educated, to do the same work himself, so he will not have the temptation to prey on our people.

I am sure you are all having the same experience; you are educating a number of people and fitting them for the use of your competitor, and you want your competitor to be doing what you are doing to get rid of this temptation on his part. This can be done, and this Association can grow only in proportion as we get together. Only in proportion as the companies throughout the United States go into this movement, will we have strength, and only then can we influence public schools according to our strength. Let us get busy, and let us take this feeling away from this particular session, that our touch with the public educators must be stronger, and therefore we must be numerically stronger. Let us start a campaign for a much larger membership. (Applause.)

MISS BEULAH E. KENNARD (of the Department Store Education Association, New York City): I just want to say one word about the very fine plan which we had before us a few minutes ago.

I do not think that we Americans ought to be so afraid of being considered sentimental as we are. Very often we give ourselves credit for lower motives than we really have. The great thing that makes business in America what it is today is real love of the game, and imagination. Now we ought to stand for this fact, that every boy and girl who goes into business finds something in it other than just promotion, or the increased wage and I know we all feel that they do. We have been spoiling our children in the school pretty steadily for the last generation trying to teach them what they can get out of the world. I believe that in business as well as in the old classical education, we ought to emphasize what they can put into it. We should show them that in business as well as in the arts and the sciences and the professions, there is a great content in the work itself. I know that is what we are trying to do, and I see no reason why we should not put into our program such a definite statement. (Applause.)

MR. C. A. S. HOWLETT (The Diehl Manufacturing Company): Mr. President, I want to add to Mr. Allen's appeal for comments on his tabulation, particularly under the heading of mathematics.

I notice that on each page devoted to electric work requirements, for line construction, for electric light service, for underground conduits for electric light service, line construction for electric power service, underground conduits for electric power service, overhead construction for signal service, and underground conduits for electric signal service, that in each case under mathematics it is recommended that the C. G. S. system of measurements be taught.

Mr. Allen will probably be interested to know that in the City of Schenectady, N. Y., where a large proportion of the pupils of the public schools go into electrical work, they do not teach this system. We have with us the President of the Board of Education of that city and also a former President of the Board of Education who, I hope, will be glad to tell us why they do not employ this system.

The President: In closing, I would like to throw out another suggestion to you, and that is that there are two sides to education, one side is from the viewpoint of the educator and the other is from the viewpoint of industry.

When discussing industrial education, we generally consider the side of the corporation, that of high industrial efficiency by means of vocational training. From the point of view, also, of the boy and girl who is being trained this is an important matter, but it is not the end, only a means to the end, a means of enabling the boy or girl to earn a higher remuneration, for the purpose of getting along better in life, and, therefore, of getting more out of life. The purpose of the education of a boy or girl is not industrial efficiency, but it is to get the most out of life. Getting the most out of life is only to some extent, though to a large extent, furthered by the commercial viewpoint of industrial efficiency, but it is not identical with it. There will always remain the two sides, the side of industrial education or lack of education, in which the corporation is interested, and the side which the public educational system represents, the viewpoint of the individual whose education shall qualify him to get the most out of life. There will always remain some divergency of opinion which can only be bridged over by co-operation.

If there is no further discussion, I herewith close the meeting.

ROUND TABLE DISCUSSION

PUBLIC EDUCATION

WEDNESDAY EVENING, JUNE 9, 1915

THE CHAIRMAN: The whole object of the Round Table is to get together and talk over freely such thoughts as we have, and to discuss the situation from any point that is interesting to us. It is an informal discussion, so do not feel diffident about asking questions, for although the Chairman will not be able to answer them all, there may be others who will.

A DELEGATE: We found by experience in Boston, also in New York, that so many of the girls in the evening high school, were choosing the commercial course, and that the girls were not willing to take the other courses that were given them. In the meantime, the business colleges were turning out young people in great numbers and who were getting very little out of the business colleges, owing to the large numbers attending them. The salaries of the girls from the business colleges were very low, due to the training they had received.

A DELEGATE: The salesmanship course. Girls elect a three or four-years course in this connection. They spend a portion of the day in visiting the large stores, and inspecting them, and the remainder of the time in training in this particular line. This plan has worked out very successfully.

Public education has been tried out by this method. Classes of children are organized who spend part of their time in the mills and part in study and recitation.

A DELEGATE: There is a new law that went into effect the first of the year that girls between fourteen and sixteen must spend eight hours a week in school, and unless they are sixteen they must complete the sixth grade. This law opens up the point we are facing now. How can we arrange for 1,000 girls between fourteen and sixteen to get through our schools with the accommodations we have at present?

THE CHAIRMAN: How many are there that are interested in this industry and would like to have this discussion continued?

A DELEGATE: It has been found that the only thing that can be done is to put this phase of education on a permanent basis such as, manual training for the boys and cooking and sewing for the girls. Also we are now doing what might be called "vocational training." This bears directly on the training of youth or the training of grown men and women for their work in the industrial world. It is the fundamental work of education to prepare people for their life work.

A Delegate: We have a system of vocational training in our city which is both state and city. The vocational training takes in several branches in the vocational line. It starts with the pre-vocational school class in the grammar school. It takes the delinquents out of the ordinary school work and puts them into the pre-vocational work—the girls for sewing and cooking and the boys for manual training and industrial work. After they have completed the pre-vocational work they are put into what they call the all-day industrial school branch of apprentice, six hours a day. Until they reach the age of sixteen they continue in the all-day industrial school. After they have reached the age of sixteen they are put into the industry on a part time basis, that is, they alternate weekly between work and school. They are trained for the particular trade that they are following in the shop. Any boy that seems promising is given studies that will best suit him for his particular line. After the boy has completed his course in our school, which is a three-year course, he is returned to the factory and works full time, that is, he works every week in the year with the exception of Saturday afternoons. Then, of course, we have the evening school which is for trade work, but it is not a part of the trade school, and I think makes up a pretty complete branch of training and co-operation with the industry.

A Delegate: Will it be pertinent at this time to say something about co-operation? I feel that the primary object of co-operation with the public educational institutions should be for the elementary 3 R's., and these subjects ought to be considered in a concrete rather than an abstract manner. We are going beyond that point now. In our new apprentice school we have a very simple examination in mathematics. Sixty-five per cent. of the students that come to us cannot pass that examination. I find that a very large proportion of the boys and girls who come to us have to be trained in their A B Cs. We must face this problem and go to work to train them ourselves. We have no one under sixteen years of age in our factory. The majority of them are of high school age.

A Delegate: The fact that those boys and girls come to you unprepared is your fault and the fault of your state. I can say in my state that the boys and girls coming from high school do very well. The school boards of the East are run by politics and the teachers are run by politics and the actual vote does not count. Such elections are all fixed beforehand in the East.

A Delegate: I can readily see why a high school boy or girl might fall down in an examination. They have not had the studies upon which they are examined, for at least six or eight years. I was requested by our state to go through the high schools and to make a report of my visits. My experience in one school was that five boys at the board could not write 6/10 in decimals.

A Delegate: Ask a doctor how well he could pass a state board examination after he was out of college a few years. The fault lies in the fact that they do not repeat. I say they should repeat at least every two weeks to bring the studies back to mind. You cannot have an efficient boy if you do not prepare him with the fundamentals. If these fundamental principles, such as changing the fractions ¼, ½ and 1/10 into decimals are thoroughly taught and impressed upon the pupils they are not going to forget them right away. Of course this is in the West, and we are not as progressive as you are in the East. This is demonstrated with a simple test of perhaps five examples in subtraction, five in multiplication, five in short division, and five in long division. If the majority of boys coming to take this test do twelve examples correctly, I think they are doing mighty well.

A Delegate: I have tried this on about 780 boys and I have never had but a small percentage do them correctly.

A Delegate: The public schools are run on 50-60-75% basis and any questions in school matters, for examination, are based on this proposition. I was at an institution a short time ago and found that as a rule 25% of their pupils flunked and 75% passed. In these classes, the teachers knew their pupils and knew the studies in which they were proficient. They get $3.00 for giving a special examination and that is the way the thing works out. The question I would like to ask is, should it not be possible for us to make a distinction in this work for those who are in trade and those who are teaching along lines of trade? Here are a lot of boys who do not know anything the elementary schools taught them. They need the review work to keep the studies fresh in their minds. We must face the facts as they are.

A DELEGATE: One of the main troubles we have in education today, is that there is too much theory and too little of practical work.

A DELEGATE: Of the thousands that come to us, when asked to work out a problem, it takes most of them forty-five minutes to do it, when it should be worked out in eight or ten minutes. We expect boys of sixteen years to know how to read, spell and figure.

A DELEGATE: I would like to suggest just one particular thing about the public school in industry. We often find that the boys who go to work have previously thought nothing about their life work. I do not say this is always true. The right boy is usually directed toward something that is going to be profitable in his life, especially if he is in high school. There is a great lack of co-ordination of effort on the part of the schools and employers. If the manufacturers and the business men will go to the schools and talk with the teachers I am sure they will get more than they are getting now.

A DELEGATE: In New York I know many graduates of the grammar schools who did not seem to know the essential features of rapid calculation, and the same is true of other cities. It should be practiced as it sharpens the thinking powers:

A DELEGATE: We have also found in some places of business that in nine cases out of ten, the foreigner is away ahead of the American.

THE CHAIRMAN: What nationality do you refer to?

A DELEGATE: Swedish and Italian.

A DELEGATE: It is a fact and I feel we have got to aid the public school graduates with more research work on these subjects. I have been a teacher and I think that one way the public should co-operate is to see that there are enough schools and that fifty, sixty or seventy-five pupils are not given to one teacher to handle. It is impossible for a teacher to hear each child recite his lessons each day when the classes are so large. Much time is devoted to studies that are not important, such as penmanship. This is hardly necessary, as typewriters are used so much now and are much more preferable. Much time is given to analytical mechanics, geometry, trigonometry and such theoretical subjects that the practical studies that are so essential in ordinary life work are apt to be neglected.

A DELEGATE: There is one thing I want to appeal for from the bottom of my heart, and that is the return to the teaching of the alphabet. Five men came to me in one week and asked if I could not do something toward making the people realize this necessity, as some children do not seem to know how to look up names alphabetically in a directory. Summing it all up, the business of this Association should be to shame the Board of Education.

A DELEGATE: I am going to make a defence for the teacher. It is necessary for teachers to turn out their pupils as quickly as possible to make room for those that are to come in. When I was in college, there was one subject that I had for a year and had never answered one question on, yet I received a perfect mark at the end of the term. There was another man in the class by a similar name and he always got up when my name was called by the professor, so I never had an opportunity to recite. In our military and naval colleges every boy must recite every day. This is indeed essential, as it keeps the boy up to the mark in his studies. You will find that in a majority of cases the larger institutions give better treatment. Try to pound into somebody the necessity of doing something.

A DELEGATE: I am closely connected with the school side of the poposition as well as the manufacturers side. I want to defend the teacher to a certain extent. The method of teaching is done satisfactorily as far as my observations go. The question is—can you not reduce the number of pupils that a teacher has? There is a great problem. Successful teaching can only be done in a small class and not in classes of fifty or sixty. Another thing, the teacher has not had practical experience in business and it is up to the manufacturer to help change the situation. Let the manufacturer go into the schools and teach, and let the teacher go into the industry. There are about 2% of the concerns in this country trying to carry on educational work in their own interests. In connection with investigations recently made in one of our cities, we found one manufacturer only who knew his needs. He knew that he needed trained engineers.

A DELEGATE: I find the teacher has been overworked, but the fact has not been realized. I have been investigating this for several years, and something should be done to bring the boy and girl up to the standard that is expected.

A DELEGATE: In reply to what has already been said, I oppose the present system of teaching. When I was a youngster, I was brought up in New York. We were taught the multiplication table, they do not teach it now. Here is a reverse condition to ours.

THE CHAIRMAN: What are we going to do about it?

A DELEGATE: Put it up to the Board of Education.

A DELEGATE: I am only a manual training teacher, but I have been in the game for some years now. We are representing a very strong problem in this country. You are dealing with a big problem. I believe there is influence and power enough in this organization to change the old normal school system, which in my mind is dead wrong. We need two types of normal schools for academic work, one to teach the old type and another which will be trained in modern ways. Scholars should be taught the alphabet and mental arithmetic. I was taught under that system and I can do more examples in my head than a great many of the children now-a-days. One of the best ways to train in mathematics is with a twelve-inch rule, instead of a bunch of figures on the blackboard.

A DELEGATE: We have two of the best types of pre-vocational schools in this country which will train the boys in the industry who have some show of going to college. We are trying to help these boys to decide what they want to do. As 99% out of 100 go into the trade, we will have to have specially prepared teachers for them.

A DELEGATE: We have discovered the fact that a child does not recognize things as he should. For example, he would not recognize instantly that 6/8 and 3/4 were one and the same. He should be taught to visualize. The school is of no value if we cannot adjust the knowledge gained and apply it readily. In working out fractions, the child does not seem to know the denominator from the numerator, or whether to divide the numerator by the denominator, or the denominator by the numerator. We have gone far enough. We have got to change our system.

THE CHAIRMAN: I will read a letter that I have which, I think, will be of interest at this time:

I have received your letter and in accordance with your request am sending answers to the questions asked in your former letter.

1. What one thing can the manufacturers do to enable you to be of more help to them?

Manufacturers and business men might, with profit to all concerned, send to the schools a statement of those matters in which they have found boys and girls lacking.

We hear complaints indirectly, but we have never had a direct communication of the kind suggested from any business man.

2. Do the public schools in your district make an especial effort to ascertain and then include in their courses the subjects which will be of especial benefit to your people entering business?

Yes.

3. In what subjects do the manufacturers find it necessary to duplicate or supplement the educational work of the public schools?

According to indirect complaints, I understand that business men find the graduates of our schools especially lacking in a sense of responsibility. While we make every effort to inculcate a proper sense of responsibility, we feel that this fault is probably one which can be corrected in a large measure only by the increased age and maturity of the child.

4. Are there any special subjects that have been brought to your attention in which the manufacturers would like to have your boys and girls more fully prepared?

See answer to question 3.

Session adjourned.

VOCATIONAL GUIDANCE

Dr. HENRY CLAYTON METCALF, *Chairman*
TUFTS COLLEGE
Tufts College, Massachusetts

Dr. WALTER DILL SCOTT
NORTHWESTERN UNIVERSITY
Evanston, Illinois

Mr. ALBERT C. VINAL
15 Dey Street, New York City

WEDNESDAY—AFTERNOON SESSION

VOCATIONAL GUIDANCE

WEDNESDAY AFTERNOON, JUNE 9, 1915

DR. LEE GALLOWAY, Presiding

THE CHAIRMAN: Gentlemen, if you will come to order we will proceed at once to the presentation of the paper by Dr. Metcalf who has made the principal investigation of this subject of Vocational Guidance and Training. This is one of the most important subjects with which the Association is concerned. It bears not directly upon the education of the employes, but upon the whole matter of the selecting, training and placing of the employes.

I will call upon Dr. Metcalf to present his discussion at this time.

DR. HENRY C. METCALF (Tufts College): Ladies and gentlemen, owing to the limited time, and because I fear that I am right in assuming that many of you have not had the opportunity to read the report on Vocational Guidance, and because the report covers a considerable variety of topics, it has seemed to me wise to prepare a brief written abstract of our report. This abstract I will now read to you.

THE SCOPE AND CONTENT OF THE REPORT OF THE COMMITTEE ON VOCATIONAL GUIDANCE

The scope and content of the report of this committee have been determined largely by the instructions of the Executive Committee, which were as follows:

1. To make a scientific study of the subject of vocational guidance;
2. To compile and make a digest of available data; and
3. To submit recommendations.

We have explained in our report what steps the committee has taken to comply with these instructions. Accordingly our report has fallen into five parts:

1. Some scientific aspects of vocational guidance.
2. A survey of such vocational guidance data as it is hoped, will be of real service to the individual members of the organization and to the Association as a whole.
3. Charting practical opportunities which exist among the

members of the Association, as indicated by the replies of member companies to the Association's questionaire.

4. Recommendations for work by the Association in vocational guidance.

5. Brief bibliography.

In Part II of the report we have given our concept of vocational guidance, but we wish to repeat that *human talents* constitute the subject matter of vocational guidance. Vocational Guidance is the scientific selection, training and application of these talents, and regards the individual as the final repository of all value. Human aptitudes are most fundamentally discovered, trained and developed in (1) education and in (2) work opportunities.

Vocational guidance properly understood is a vastly greater problem than the vocational guidance of youth. It forces us to regard all institutional life, and more particularly economic opportunity, as the agency through which normal human needs are to be realized. It is a call for readjustments in education and industry that will establish, maintain, advance and defend individual freedom. Real liberty is found in the conditions which enable a man to make the most of himself.

We have touched upon the far-reaching influence of the work environment, stating how this influence constantly and profoundly affects the physical, intellectual and moral welfare of all the people. It must never be forgotten that for the great majority of mankind it is the values emanating from the work environment that are the most far-reaching. For this reason we can readily see the great importance of adjustments in education as a preparation *for* work, and of readjustments *in* industry so as to discover, and through wise application, to develop the talents of all the workers.

In this connection we have voiced our belief in the generality and versatility of latent human talents, and have pointed out the function of the employer as vocational guide. Whether we are conscious of it or not, work is the chief training school of life, because it consumes so much of our lives; but the fact is only beginning to be grasped that versatility of employment is the sieve for catching and testing varied abilities.

Taking as a keynote the development of human personality, the thought is that every firm might undertake systematically to discover, train and direct talents, and in thus permitting the fullest development of each worker it will automatically develop those qualities necessary for permanent industrial leadership and will also open the door of opportunity for those lower down. Vocational guidance forces us to comprehend the physical, intellectual, and moral worth of *each* worker; it is a capacity-catching and capacity-developing mechanism; it forces us to consider educational economic opportunity as one and inseparable.

Passing on from a summary of the business man's interest, and hence the interest of The National Association of Corporation Schools, in the vocational guidance movement and reviewing some of the underlying reasons for the overwhelming interest in the human factor today, we proceeded to a survey of available helpful vocational guidance data, showing (1) what various commercial bodies, as representatives of the business world, have done and are doing to co-operate in this movement; and then gave an account of vocational guidance in secondary schools and colleges, with a view to showing that the problems in education and in industry are similar in that both are trying to do away with the turn-over and in that connection are trying to find out early something about the abilities of the grist that passes through their hands. The parallel is not imaginary. We know that the problem of the turn-over begins in the early grades. Statistics need not here be given of the dropping out of boys and girls in the elementary grades, as they surround us on every hand; but what is not so generally known is that there is also a heavy attendance mortality in the colleges and universities in the earlier years; the turn-over in business needs no comment among such a group as this.

I do not believe that many people have a conception how widespread the movement is throughout this land—both in education and in industry—for better adjusting the individual for the world of work and in it. Hence he must be analyzed, and therefore tests of all kinds: psychological, observational, pragmatic-scientific, pseudo-scientific and quack—but all with an element of truth in them; hence also tests for ability in the lower schools and in the colleges, especially psychological evaluations in the colleges and universities. Most significant in this respect is the investigation recently begun by the Carnegie Foundation for the Advancement of Teaching, which aims to test out freshman engineers for their coming profession and thus to establish norms for entrance qualifications for the entire engineering profession.

Time forbids going into the ways in which the connection between business and the school systems can be made, but the work of some of the local Chambers of Commerce in this respect is worth serious study, especially that of the Buffalo Chamber. Likewise, Rochester affords a good example of the get-together of business groups and the schools to study the local problem; and this brings up the question of surveys—vocational, industrial and occupational—which are multiplying on every hand, and which have great importance for the business man in that they voice the desire to know not only how the industries want their workers trained, but also what industry has to offer. There is every indication that inquiry into work conditions will increase, especially from outside agencies, in view of impending national aid to training for entrance into the industrial and business world.

By way of summary we would recommend a careful reading of Part III, "Survey of Available Helpful Guidance Data," as indicative of some of the more important present-day aspects of the vocational guidance movement in certain centers, as indicative of the maner in which this movement is affecting commercial bodies and thus reaching the industries, and as pointing out certain phases it is taking in the educational systems. The importance to The National Association Corporation Schools of taking stock of what is being done on the outside is to ascertain methods developed therein which could be utilized by the Association in working out its own problems.

To recapitulate, Chambers of Commerce can assist in various ways: as follows:

1. Assisting legislation.
2. Raising funds.
3. Educational, vocational, industrial or occupational surveys.
4. Advisory committees to municipal school authorities.
5. Vocational guidance and placement.
6. Part time schools, night schools and special courses for workers.
7. Aiding in establishing uniform standards of qualification.

8. Publicity work in local papers to stimulate public interests.

9. Talks to pupils by business men to stimulate interest in business questions.

Secondary schools are co-operating in the movement in the following manner:

1. Modifying curriculum; differentiating courses.
2. Vocation bureaus.
3. Vocational counsellors in schools.
4. Placement work.
5. Surveys.
6. Co-operation with industries.
7. Tests for ability and aptitudes—psychological or otherwise, including testing through courses in English on industrial conditions.

Vocational guidance in colleges and universities is represented by the following lines of activity:

1. Vocational Conferences.
2. Vocational Counsellors or Bureaus.
3. Modifying entrance requirements or curriculum in the light of vocational guidance principles.
4. Checking alumni's career in the light of courses taken as a student.
5. Tests for ascertaining abilities, aptitudes, etc., psychological or otherwise.
6. Publications on vocational guidance or allied subjects.
7. Courses in vocational guidance; guiding, counselling.
8. Giving opportunities for further training to workers (both line and staff) through extension courses, technical, commercial, etc., by correspondence, lecture or shop instruction.

Finally the members of the Association should be cautioned against pooh-poohing the vocational guidance movement because so much of it is in the incipient stage and in the hands of the inexperienced, and because failures are therefore inevitable. The movement voices a great tendency, but it has passed the stage of discussion as to whether there is any need for it or not. The present problem is to devise effective ways and means for putting it into operation. Even now opinions are crystallizing that were extremely hazy a few years ago.

This committee has made inquiry (by means of the questionaire method) to see what the members of The National Association of Corporation Schools could utilize out of the experience of groups other than those of the business world, strictly speaking, with vocational guidance; we have also turned the searchlight on a fraction of the business world (the members of this Association) in order to bring together individual experiences and to interchange ideas. In our report will be found tables summarizing the replies received from member firms in answer to the Association's questionaire, also some of the points on which the Association needs to be informed. Judging from the replies to the Association's questionaire on vocational guidance made by its corporate members, it seemed to the committee that for immediate purposes the subjects which promised most for further study were: (1) deliberate training for promotion; (2) methods of promotion; (3) methods of selecting executives and also those lower down; (4) trials in other work; (5) systems of tests used in analyzing abilities and characteristics; and (6) the functioning of interdepartmental systems. We wish that the questonaire method of inquiry were adapted to bringing out details, but unfortunately it is not; and in the majority of cases we have as a residuum merely valuable clues, which should be followed up by first-hand inquiry.

In several cases we were given sufficiently detailed information on points of special interest to all the members of The National Association of Corporation Schools to assume that if similar information could be gathered from the entire membership the Association would have a body of material unique in its helpfulness. For instance, a most significant experiment in evolving scientific methods for the selection of employes was submitted by a prominent Class A firm employing large numbers, which was reported in full. This method is a combination of *psychological* and *observational* tests, and the results secured have been sufficiently satisfactory to maintain the interest of this company and to make it hopeful for further success. What is needed is a real confessional, a pooling of experiences of successes and failures of the membership, and even of non-members, and a thrashing over to find out the elements of success and failure and the circumstances making for these. We need to know the number of employes affected; the cost per employe; the extent of the supervisory force and the amount of time necessary for getting results; what failures have occurred and why; systems of tests discarded or adopted, and their relative merits; experts who have been of assistance; all of this is more or less of a closed book to the Association as a body. For instance, there are at least four other Class A members reporting that they are carrying on psychological tests, while four other firms report that they are carrying them on in part, or to a limited extent, or that some tests have been made, and a fifth reports that it is considering these tests. Two of the firms using psychological tests report that they are using "physiognomy" tests also, while another public service company is using physiognomy alone. In addition, one Class A company states that it has adopted the Blackford Observational Method of Character Analysis.

A number of firms report that they have made a study of the personal characteristics of each employe—health and physical characteristics, intellectual and manual abilities, attention, memory, type of activity, leadership, etc. However, specifically what methods are used for determining these facts are not stated.

Another vital subject for the Association is the selection and training of executives, and we have had described an educational experiment in a large Class A firm for their general foremen, foremen, assistant foremen and a department known as the "flying squadron," who are the pick of the employes throughout the plant and who are taught all the operations of the plant. Several other educational plans were indicated for training for executives.

We need to know, first of all, What is an executive? It is impossible to talk in the generic term of "executive." For this reason a classification is necessary, and it appears to the committee that preliminary to working out courses of training for the executives of the Association that The National Association of Corporation Schools might begin a classification of the executive positions found in their own companies.

Secondly, what kind of training in common, outside of the technical knowledge of the business, should all executives have? In other words, what business, economic and social background and fund of general information does an executive position presuppose; and where do men and women go for it? What available systematic sources are there at present? Has The National Association of Corporation Schools made any inventory of this information? The available sources for some of this information seem to be as follows:

I. *Business Books and Magazines* (fugitive). Costly and long drawn out.

II. *Correspondence Courses.*
  International Correspondence Schools.
  Alexander Hamilton Institute.
  University Extension (especially University of Wisconsin for business courses and engineering; La Salle Extension University, Chicago).
  Business Bourse.
  Blackford Course, Emerson Course, and other individual courses, such as Pace & Pace, Sheldon, Cody, etc.

III. *Personal Instruction.*
  1. Outside of firm.
    Young Men's Christian Associations.
    University Extension (not generally accessible in many localities).
    In some localities—higher institutions.
  2. In firm itself.
    (a) Need should be definitely formulated for different groups.
    (b) Work out some courses on basis of same.
    (c) Centralize the working out and supervising of courses by The National Association of Corporation Schools.
    Suggest National Association of Corporation School instructors, who would travel around personally and help give courses. Specialists would be more desirable than isolated lecturers now operating among members of the Association without correlation with each other. They could travel from firm to firm or from place to place.

Especially is the training of executives significant in view of the fact that a number of firms report that they are trying to secure men for the higher positions entirely within the organization, and in some cases are holding study classes for investigating special problems and the theory of the business. In the above connection a study of plans for the promotion of executives and of the value of various methods for the cross-fertilization of ideas are involved. Of fundamental importance is the need for devising better methods for insuring permanence in the labor force, and among others the following means are suggested:

1. Scientific selection of men.
2. Scientific education and promotion.
    (a) Versatility vs. close specialization.
3. Diffusion of responsibility down the line.
4. Adequate recognition and reward for work.
5. Democratizing work conditions to a larger extent.

Versatility. Trials in varied work positions. A considerable number of Association members are experimenting in this field. Nineteen firms report specifically that they give trials in other work, but we need to know just what types of work or positions these deal with, and the methods of rotation employed.

We cannot tell whether the work is manual, mental or executive; nor whether the experiment succeeded or failed; nor in some cases what the object in rotating was. Rotation ordinarily has three different purposes: (1) to enable the worker to find his niche, *i. e.,* the work for which he is best fitted; (2) to brave the under—and unemployment problem and thereby stabilize the force in dull seasons; (3) to aid the worker in getting a varied experience, *i, e.,* a kind of promotion. One firm reports that it shifts men around when a change is necessitated by their physical condition; while some corporations make it a practice to transfer from one department to another if the worker does not make good after a probationary trial. For instance, a prominent Class A member reports an illuminating experiment in trying out workers until they find the work for which they are best fitted. His firm has done a good deal of experimenting with certain employes to see if a larger percentage of them could not be placed at tasks which they could do more advantageously than the work which they were then performing and which would engage their entire interest, and their endeavor in this direction has been well worth while. In ten months they had 110 transfers of employes from one department to another, 65% of which represented studied effort to place the employe in his natural niche. This firm averages about 2,300 hands, and in ten months had only 340 people leave.

We need, in the above connection, a classification of businesses, positions, processes, etc., readily admitting free alternation. It would probably be found on investigation that the following three groups of problems will arise: (1) in connection with businesses, trades, and processes readily admitting free alternation; (2) others less adapted to alternation; (3) those where the principle of alternation may prove non-applicable.

This again brings us to the general problem of the turn-over. We know that many firms are consciously reducing the turn-over, but we need to know in each instance the specific methods employed. It is not sufficient to know that the employment end has been or is being centralized, but we must know something of the kind of persons needed in the industry, the work they do, whether certain types of business have inherent difficulties making for the turn-over, or whether the turn-over is largely the result of external factors, *i. e.* type of organization and management and personal relations. This information cannot be gotten except at first hand, and by the closest co-operation with the firms involved. This information is vital to vocational guidance in industry and needs scientific inquiry.

Closely allied to the turnover is the question of employment methods and types of employment offices. In "A Practical Program for the Preventing of Unemployment in America," submitted by the Secretary of the American Association on Unemployment, Dr. J. B. Andrews, in December, 1914, one of the first recommendations, among others, for the regularization of industry is for the establishment of employment departments by employers.

Employment offices are in a transitional state: some firms, progressive in many respects, still cling to decentralization and leave hiring and firing to individual foremen or executives, sometimes to cost departments. Where no centralized bureau exists, promotion records are not likely to be kept and little study of characteristics made, beyond the obvious. In a stage higher will be found a centralized office, but hiring and discharge are still vested in the hands of outside executives, the office serving as a preliminary clearing house in the selection of available employes. Often where systems of scientific management are operating and time studies worked out and positions classified, the method of employment will still be somewhat antiquated. In the newest type of employment office, we find a trained man at the head of it, who is experimenting with the newest plans for selecting, promoting and in general supervising each employe. He looks after the promotion end, keeps careful records, which are justly supervised, and has a grasp on the social aspects of his work. He oversees the development of each worker, and often works with welfare, education and recreation departments, or has charge of them entirely. He is where a wise vocational counsellor is needed. We ought to take stock of existing schemes of employment, of types of offices, of how these are functionalized, of whether they are adequately manned or not, and how training for the headship of an efficient department is obtained. Morover, as in the case of training for executives, we should take stock of existing agencies for supplying the business, social and economic background necessary for this work, and if necessary, devise a training course within The National Association of Corporation Schools. A course on employment methods will be given at the Amos Tuck Business School of Dartmouth next year, but the problem of this Association is to bring similar information to its members while they are at their daily tasks.

Ladies and gentlemen, in the brief abstract of the report of your Committee on Vocation Guidance, I have endeavored to call your attention to some of the most obvious problems that the committee has encountered in its investigations. The problems, in the judgment of your committee, that seemed most important and immediate, you will find at the close of the report under the heading, "Recommendations." We have there made several specific recommendations, and hope that at the Round Table discussions they will receive your special attention. If any problems falling within the scope of our investigations, seem to any of the delegates present more important than these suggested, we shall be very glad to have them called to our attention. (Applause.)

REPORT OF THE COMMITTEE ON VOCATIONAL GUIDANCE

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I. INTRODUCTION

Method of Procedure of Committee

To the Executive Committee of The National Association of Corporation Schools.

Gentlemen: In accordance with your instructions of September 1, 1914, the first Committee on Vocational Guidance submits herewith its annual report.

The scope and content of this report have been determined largely by the instructions laid down at the time of the Committee's appointment in September, 1914, which were as follows:

"The duties of this Committee will be (1) to make a scientific study of the subject of Vocational Guidance, (2) compile available data, (3) make a digest of such data, and (4) submit recommendations in a report to be made at the third annual convention."

Although your Committee has been in existence for some months, the real work of formulating the report had necessarily to wait upon the receipt of replies to the general questionaire decided upon by your Association this spring; and these have only very recently reached the Chairman. Again, in order to ascertain the extent of our subject and to list the many outside agencies and connections with which vocational guidance in business inevitably leads, it was necessary to make something of a direct preliminary inquiry among the more representative of these agencies to find out what is at present being done by them. This has been recently undertaken privately, at a cost of considerable time and expense. Moreover, it must surely be recognized that the scientific formulation of vocational guidance cannot be extracted from any form of inquiry—questionaires or otherwise—but comes slowly from long thought, study, observation, and critical analysis.

In short, owing to the complexity and extent of the field covered by your instructions to the Committee and to the comparatively short time in which it has been possible for the Committee to really function, this report must necessarily be merely a suggestive report of progress. Especially is this true in the case of the lists of associations and centers enumerated as interested in vocational guidance, which are merely tentative and by no means exhaustive. To ascertain the many things we need to know about vocational guidance on the outside as well as among the member corporations of this Association, would take nothing less than a careful personal investigation involving the expenditure of at least several thousand dollars.

Bearing in mind our instructions from the Executive Committee of the Association, and the guidance of the Executive Secretary, the work of the Vocational Guidance Committee falls into the following five parts:

1. A statement, or outline, of the *scientific* aspects of vocational guidance.
2. A *survey* of such vocational guidance data as will be of real service to the individual members of the organization and to the Association as a whole.
3. A *digest* of such phases of vocational guidance data as seem of immediate practical service to the members of the organization and to the Association as a body, i. e., charting helpful opportunities.
4. Recommendations for consideration at the third annual Convention.
5. Bibliography.

Following our instructions, therefore, we have accordingly treated the material of our report under the following headings:

I. Scientific Aspects of Vocational Guidance.
II. Survey of Available Helpful Vocational Guidance Data.
III. Charting Practicable Opportunities.
IV. Recommendations.
V. Bibliography.

FOREWORD

Before entering upon the analysis of the main subdivisions of our report, we wish to present a brief introductory statement setting forth our understanding of the business man's interest, and hence the interest of The National Association of Corporation Schools in the vocational guidance movement.

To-day as never before the attention of the man in business is being turned to the fact that the most important thing which he has to deal with is the plain human factor. How has this realization suddenly come about? Not simply because he conned the matter over and came to this surprising conclusion, or because he was smitten with the bond of brotherhood for fellow-toilers, but because he finds himself at the end of an industrial period where the greatest economies have been effected by labor-saving machinery and at the beginning of a new stage where the human ingenuity is necessarily devoted to a finer organization of business. Because we are realizing that these economies in mechanical invention cannot progress indefinitely—here is where the inevitable law of proportionality enters in—we have become interested as never before in scientifically grouping the human around these machines and scientifically adapting it to the mechanism of business, i. e., to the highly developed form of business organization which characterizes our present industrial era. This is specifically what scientific management is attempting to do. But the first uncharted sea scientific management has discovered is our general ignorance of the content and potentiality of the human and of truly scientific right relations between those who work and those who hire—not that the labor problem has not always been with us—and for the first time in known history the industrial world is stopping, looking, and listening—and also talking—about studying the human first. We all remember the pointedness of the ghastly joke of several years ago about giving more care to the life of a machine belt than to the welfare of the operator. You also recall the statement of a fellow-member of this Association, Mr. St. Elmo Lewis, made from the floor of the Philadelphia Convention: "There is hardly a plant in this country that is not overmachined and overbuilt, and the consequence is that the *man* is the *last consideration* in most plants." (*Proceedings* of The National Association of Corporation Schools, Vol. II, p. 64.)

There is a great deal being said to-day about industrial unrest. Public and private bodies and individuals are probing its causes, and a government commission is at present writing its final recommendations for legislating some of these fundamental causes out of existence; but in the last analysis this unrest may be said to be due largely to the mal-adjustment incident to subordinating one human will to another, when the opportunity for learning anything other than the task at hand is lacking. In other words, a countless number of workers—and men higher up for that matter—are chafing under too narrow specialization, especially when that is accompanied by work conditions which tend to repress the development of industrial and human personality.

On the other hand this discontent is partially voiced in the tremendous human turnover which has been characteristic of our industrial regime; and employers are wondering why so many "ships-in-the-night" pass through their employment offices. Not only is this frequent shifting disastrous to the continuity of the work, but from the mere standpoint of dollars and cents it has been found an expensive proposition to hire and fire say six or seven times the number of the permanent force during the year. This frightful waste in the turnover is due fundamentally to the lack of knowledge regarding the generality and versatility of human talents, to the lack of adequate training before and after entering industry, to the lack of proper employment plans and scientific work selection, and to the lack of definite knowledge of work conditions.

Moreover, a growing body of socio-economic literature is voicing the insistence upon the social shortsightedness with which industry is dealing with the majority of its workers; and the third party—the men and women on the outside—are becoming impatient with a system that permits the industrial wreckage—the broken and cast-off—to be thrown back on society for after-care. In other words, philanthropy is being challenged particularly by those who are conducting it. The latter are demanding that industry not only bear the cost of human depreciation, but that it assist in preventing this depreciation.

Out of these various points of attack—the unsentimental attitude of business, for in the last analysis it is merely a question of whether *it pays* or not; the searching for larger opportunity by the worker; the desire for a fair deal by the public at large and to escape from being made the football by contending interests; and the protective attitude of the social idealist—the same conclusion is reached: Develop the man. In other words, put your emphasis on the generality of human talent, and set about to create the best possible work environment for discovering, training and applying human aptitudes. In the last analysis every industry to-day is looking for ability, and so insistent has this search become that we are fairly deluged with the literature—good, bad, and indifferent—for attaining this object. We may say, by way of summary, that the movement in recent years has assumed two distinct and parallel phases: (1) the development of scientific management in industry, and (2) the criticism and reorganization of educational machinery (both in the schools and colleges) on the outside. Indeed, as has been recently well stated in another connection, "industrial training, vocational guidance and industrial management are all but successive phases of the same problem, which is to make every member of society an efficient industrial unit, and also a satisfactory social unit."

Taking as a keynote the development of human personality, the thought is that every firm might undertake systematically to discover, train, and direct talents, and in thus permitting the fullest development of each worker it will automatically develop those qualities necessary for permanent industrial leadership and will also open the door of opportunity for those lower down. The benefit will be mutual. Whether we are conscious of it or not, work is the chief training school of life, because it consumes so much of our lives; but the fact is only beginning to be grasped that versatility of employment is the sieve for catching and testing varied abilities. For that reason, also, systems of education within the business, of more equitable wages and work conditions, are being utilized by many prominent business organizations to-day in the hope of creating a permanent force.

In his admirable inaugural address at the Philadelphia Convention, the President of our Association, Dr. Steinmetz, with prophetic vision, declared that to the functions of producing, exchanging, and selling, industry must add "the human function." More comprehensively than any other movement, vocational guidance takes for its supreme function the *conservation of human energy*—the eradication of the industrial waste; and no elaboration of this waste is necessary for an understanding of its enormity.

Business has definitely challenged our educational systems. An analysis of the Proceedings of our previous Convention reports, of our monthly bulletins, of the replies to many letters of inquiry, of a rapidly incoming number of occupational surveys, of a vast quantity of fugitive magazine literature indicates that the complaints which employers make deal with (1) the meager equipment and indifferent attitude of the juvenile recruits toward work. Because of this original lack of proper preparation and unscientific choice of work there follows, (2) the costly turnover and instability of workers; and from the attitude of indifference and resulting instability there follows (3) a serious lack of highly skilled workers and a shortage of competent men for the posts of full responsibility. Business has rightfully challenged the schools. But there is a rapidly growing and widespread inquisitiveness to know, not only *why* business has challenged education and *how* business wants workers trained, but also what business has to *offer* the workers.

Vocational guidance forces us to comprehend the physical, intellectual, and moral worth of *each* worker; it is a capacity-catching and capacity-developing mechanism; it is the best instrument in the best distribution of knowledge and the best *personal* distribution of work opportunity; it forces us to consider education and economic opportunity as one and inseparable. Through vocational guidance business and education are united in the great problem of the conservation of human resources. This it is that gives reality to the interest of The National Association of Corporation Schools in the vocational guidance movement.

II. SOME SCIENTIFIC ASPECTS OF VOCATIONAL GUIDANCE

Definition. Vocational guidance is the scientific selection, training and application of human talents. Human talents constitute the subject matter of vocational guidance. Human aptitudes are most fundamentally discovered, trained and developed in education, and in work opportunities. The philosophic import of our definition comprehends the discovery, training and protection of every human being. It regards the individual as the final repository of all value, and hence presupposes scientific forethought by society from the beginning of life through to its end.

Guidance should be in so far as possible a matter of *self*-direction through the right kind of opportunities. But there are grave and detrimental traits in the case of youth standing in the way of wise self-guidance—habitual impulsiveness, a trait incalculable and common to youth and primitive man; improvidence, or the inability to look into the future, which in occupational choice causes overemphasis on immediate work offerings and high initial wage, and explains largely the entrance of so much juvenile labor into blind-alley trades; intolerance of restraint, a trait in no small measure explaining the heavy mortality in the upper grades of our secondary schools, and a considerable share of the shifting from job to job in industry; the inability to grasp the significance of ownership, a trait that can be established only as the result of experience extended over a period of years; the ability to weigh wisely future values belongs not to adolescence; and imitativeness, which causes the child to select his life career without regard to personal fitness. To these emotional traits of youth—impulsiveness, improvidence, shortsightedness, intolerance of restraint, inability to forecast the future and imitativeness—should be added the inability of the young, because of the lack of experience, to use constructive imagination and to grasp general truth. The child lacks abstract ideas because he lacks enough concrete ideas.

Youth, with our present methods of industrial organization, is helpless when it comes to a wise vocational choice, not only because of immaturity but because of ignorance regarding vocational demands and needs. This helplessness of youth, and the very nature of our large-scale business organization, and our present methods of autocratic management, have forced all careful investigators of the child problem in industry to practically the same conclusion, namely, keep the children out of the industries. This is the challenge to the industries in return for the challenge industry has passed along to the schools.

Both challenges are justified, and are serving to direct the attention of educators and employers to the urgent need of readjustments in our educational machinery, and business organization and management. This two-fold criticism is doing much to bring about the co-operation between education and business that is so essential to the right solution of the problems.

Vocational guidance scientifically understood is a vastly greater problem than the vocational guidance of youth. It forces us to regard all institutional life, and more particularly economic opportunity, as instrumentalities through which normal human needs are to be realized. It is a call for readjustment in education and industry that will establish, maintain, advance, and defend individual freedom. Real liberty is found in the conditions which enable a man to make the most of himself.

Each individual as he proceeds through life is the result of a perpetual series of choices. These choices constitute for every individual his scale of life values. Any scale of life values must start with the conception: Life is a unit. We are the result of what we bring into the world, what we find in the world, and what we make of the co-ordination of these two. It is the business of life to give us what we permanently desire in our moments of truest intelligence. What do I want most in life? How can I best get it? These are among the most searching questions any human being can ask himself. In trying to realize any true scale of values, one should bear in mind his many needs and many-sided nature. Man is the result of many influences or forces coming from many sources—the economic, educational, social, political, religious, etc. He needs health, income, knowledge, sociability, æsthetic enjoyment, and opportunity for wholesome, constructive leisure, and in a democratic country in particular, it is all important that he should have a sense of justice satisfied.

The Far-reaching Influence of the Work Environment. Now no one of the many sources of value-producing powers in a man's life is so important for the student of vocational guidance as the many influences radiating from the work environment, unless it is perhaps one's religious convictions. The influences of the work environment constantly and profoundly affect the physical, intellectual and moral welfare of *all* the people. Some groups of society are more directly moulded by economic influences than others, but none can escape the influences of the business world. Occupation integrates life. To our vocations we are literally attuned. All values—the economic, the intellectual, i. e., the value of truth and knowledge, the values of association (especially the right kind of work association), which are among the most precious in life, but largely destroyed in the work environment of our modern, highly specialized industries; the æsthetic values, gravely undermined by mass production, standardized product, and too frequent deterioration in quality; the values of character, and the religious values are all one. Each of these fundamental life values influences every other value, but it must never be forgotten that for the great majority of mankind it is the values emanating from the work environment that are the most far-reaching.

The fitting of talents to tasks is the essence of the vocational guidance movement. This being true, in view of the far-reaching significance of the work environment, we can readily see the great importance of scientific adjustments in education as a preparation *for* work, and readjustments *in* industry so as to discover, and through wise applications, develop the talents of all the workers.

The significant influence of the rise of the human in business relations is seen in many directions—in the distracted and torn conditions in which society to-day finds itself—in the conflicts between employers and laborers as individuals; between organized groups of employers and organized groups of laborers; in the dissatisfaction of the business world with our educational output; in the discontent in the educational sphere over what highly specialized large-scale industry has to offer to the workers; in the grave criticisms coming from the scientific, social philanthropist, because of the social burdens forced upon society by the social laggards, manufactured in large part because they were first misemployed, then underemployed, then unemployed, and finally made unemployable through narrow, monotonous specialization, seasonal employment, or juvenile blind-alleys. All these and many other divided and antagonistic interests, are developed primarily out of work conditions. The sphere of life *in work* for the masses is becoming more intensified. At the same time, the increase of wealth, the spread of all forms of education, the growth of political democracy, the expanded freedom in many directions have vastly enlarged the horizon of the average man. The result of the forces without and the increased mechanization or standardization of the workers within industry, owing to the division and specialization of labor, has been to produce a paradox. The work environment for the masses has tended to crush the rising sense of personality. Many forces appeal to the sense of personal prowess, but how in work display achievement? We strive to establish personal liberty but too often choke spontaneity. An authority in one of our largest corporate industries within a month told a group of college seniors that efficiency was so highly developed in his corporation and the management so standardized that promotion in his company in the United States for the young man was primarily a process of waiting for the dead man's shoes! He assured the expectant seniors, however, that China offered a fertile field for initiative, daring and personality! The human element coming to the front is the most significant factor in the business world. Out of the evolution of the human interpretation of work The National Association of Corporation Schools was born.

The Employer as Vocational Guide. It is this human interpretation of work that gives such a profound significance to the new profession of business administrator. Here is a great unexplored field for scientific research, rich in opportunity and bound to yield unexpected results for those who develop them in the right way. Aside from his own life processes of choosing, every individual is guided by many counsellors,—parents, friends, teachers, doctor, employers, and now looms the vocational psychologist, and expert vocational counsellor. Of all these directive agencies, the far-reaching possibilities and the definitive significance of the employer in selecting, training, and applying human energy on the basis of *known* aptitudes, is as yet but slightly comprehended. The policy of every business takes its stamp from the executive. Vocational guidance, from the executive viewpoint, should be a guidance in physical, intellectual, social, and moral values to be got from the right work environment. This means a scientific study of the individual—a knowledge of his previous history as well as a careful watch over him after employment; it means a scientific study of the many different work opportunities; it comprehends the possible values both to the business and to the worker arising from trying the worker out in different work positions. Most men are probably far more versatile than we think. This human interpretation of work means, further, a constructive understanding of the human methods of evoking, stimulating and justly rewarding known abilities as against the too common methods of driving, penalizing, and arbitrary discharging. The commonly accepted notion that large-scale industry must necessarily take on a more military type of organization and management, and that the power of arbitrary discharge is the most effective weapon in work discipline rests upon a false psychological basis. This attitude is among the most fruitful causes of our present grave misunderstandings, bitter criticisms and cross purposes in the business world. Wise guidance will, instead of this arbitrary force, seek individual talents and tastes, strive to make them a permanent part of the working force, extend responsibility as fast as it can be borne, encourage spontaneity, and do all possible to evoke the value arising from the power of the right co-operative work relationships—the might of brotherhood.

The Generality and Versatility of Human Talents. Vocational guidance, then, seeks to translate economic values into human values. It strives to set up a standard of human welfare in work which it believes is the best business standard. In setting up human utility as a work standard, vocational guidance believes that an increasing profit will clearly follow in the humanized business management. Every employer, indeed every worker and every member of society, is interested in increased profit or reduced cost. When vocational guidance urges the business administrator to enter the vast field of unexplored human energy, and attempt more scientifically than ever before to discover, train and apply the special aptitudes of *all the workers*, the vital question arises: How general and how versatile are human talents?

There are two broad and almost diametrically opposite theories regarding the generality and versatility of human talents. One theory declares that ability is rare, and that the great majority of men are of the humdrum, commonplace sort. Those who hold this view will not grow over-enthusiastic over vocational guidance. They will stand by the old, autocratic methods of business management, believe that managerial ability is rare, that profit-sharing belongs only to the few possessing ability, and emphasize obedience in work as one of the cardinal virtues.

Those who support the opposite view will hold that ability and talents are potentially widespread, that most people are far more versatile than is commonly thought, and that the limited display of talents is fundamentally due to the lack of the right sort of opportunities in education and in the work environment for the discovery, right training, and proper application of innate gifts. "Ability is everywhere. What is rare is opportunity." Freedom of *individual* opportunity and diffusion of the *right kinds* of education are the essential means for discovering the potentialities of human beings.

Neither of these theories is susceptible of clear proof. Biology, psychology, economics, and sociology have a long road to travel before the inscrutable laws of human nature and the influences of environment are clearly understood. But it is certainly clear that the vocational guidance movement takes on its chief significance for individual welfare, as a means of business upbuilding, and as a method of social advance by proceeding upon the theory that the greatest single source of waste in the world is due to the maladjustments in education and industry arising from our ignorance regarding human aptitudes and vocational needs. It is the belief in a great fund of undiscovered and undeveloped human resources that makes the vocational guidance movement of such significance for the employer. He believes that these human resources through right methods of evoking, training and applying can be turned into constructive channels; he believes that skilled workmen can be developed within his own works; that from the rank and file far more executive ability can be found than has been believed to exist—in a word, that there has been a great waste of talents because of the lack of the right kinds of work opportunities.

"The originative part of America, the part of America that makes new enterprises, the part into which the ambitious and gifted working man makes his way up, the class that saves, that plans, that organizes, that presently spreads its enterprises until they have a national scope and character—that middle class is being more and more squeezed out by the processes which we have been taught to call processes of prosperity. Its members are sharing prosperity no doubt; but what alarms me is that they are not originating prosperity. No country can afford to have its prosperity originated by a small controlling class. The treasury of America does not lie in the brains of men now in control of the great enterprises that have been concentrated under the direction of a small number of persons. The treasury of America lies in those ambitions, those energies, that cannot be restricted to a special favored class. It depends upon the inventions of unknown men, upon the ambitions of unknown men. Every country is renewed out of the ranks of the unknown, not out of the ranks of those already famous and powerful and in control." (Woodrow Wilson in *World's Work,* January, 1913, p. 259.)

There is a rapidly rising conviction throughout the length and breadth of our land that there is a great fund of undiscovered energy in "the ranks of the unknown." The National Association of Corporation Schools was primarily born through the conviction that there is a great fund of human capacity going to waste. Vocational guidance, scientifically understood, is the best capacity-catching and capacity-developing mechanism yet devised.

III. SURVEY OF AVAILABLE HELPFUL VOCATIONAL GUIDANCE DATA

It seemed to the committee that the two facts of greatest interest and benefit to the Association at the present time would be gathered by (1) taking stock of the vocational guidance movement in its more important present-day aspects as it exists in various centers; as it is affecting commercial bodies and thus reaching the industries; and what phase it is taking in the educational systems—public school, college, and university. (2) The methods developed therein which could be utilized by the Association in working out its own problems. To do this in any complete manner would be an enormous task, presupposing a complete enumeration of centers of activity, and a lengthy correspondence or personal visit for which this committee has no facilities. Neither did the committee go into the matter of types of schools or courses which are being established to meet newer needs. We shall merely point out certain commercial and national organizations which are active in the vocational guidance movement, enumerate localities where industrial or vocational surveys of the industries have been or are being made or contemplated in the near future, centers where vocational guidance bureaus exist, and shall emphasize how widespread the movement for testing capacities and abilities of students, both in the lower schools and the colleges and universities. The philosophy of this tremendous movement has as yet not been written, but throughout the length and breadth of the country—in education and in industry—there is the attempt to better adjust the individual in the world of work—hence he must be analyzed. Therefore tests of all kinds, psychological, observational, pragmatic—scientific, pseudo-scientific and quack, but all with an element of truth in them. But the world of work into which the individual enters must also be analyzed, especially to guard the footsteps of the young—hence occupational and industrial surveys. Neither the schools nor industry can ascertain these facts singlehanded—hence the co-operation between the two through organizations, commercial and otherwise; hence, in part, vocation bureaus.

I. COMMERCIAL BODIES INTERESTED IN VOCATIONAL GUIDANCE

No complete canvas of the activities of the various Chambers of Commerce and other commercial bodies in the United States in the vocational guidance movement has yet been made so far as we know; but we have been fortunate in securing the co-operation of governmental bodies and in being given access to some unprinted data. However, the United States Department of Commerce is at present compiling a revised edition of the activities of prominent commercial organizations of the country, to appear as a government document, which will indicate what organizations are doing anything in vocational guidance. Through the courtesy of the United States Chamber of Commerce we were permitted to insert a question in the inquiry sent out by the Department of Commerce which will bring out this information. Unfortunately, however, the results from the questionaire are not available for this report, but will appear from the press probably in June.

In spite of any complete compilation of activities the United States Bureau of Commerce recently reports that they feel highly gratified to find that commercial organizations in all parts of the country are showing definite interest in the better preparation of boys for work (one phase of our subject), and that when the need of the community has been ascertained, the commercial organization is the center of an immediate effect to better conditions.

It has been pointed out that there are at least eight different ways in which commercial bodies can be of assistance in connecting the youthful worker with his work, and methods have been suggested by the Buffalo Chamber for giving further expert training for industrial management to the promising worker or foreman. The eight methods are as follows:

1. Assisting legislation.
2. Raising funds.
3. Educational, vocational, industrial, or occupational surveys.
4. Advisory committees to municipal school authorities.
5. Vocational guidance and placement.
6. Part time and night schools.
7. Publicity work in local papers to stimulate public interest.
8. Talks to pupils by business men to stimulate interest in business questions.

The work of the Buffalo Chamber, which raised $10,000 for establishing a Vocational Bureau to act in co-operation with the schools, seems so sterling and its recommendations for further progress so incisive that the committee has considered it worth while to quote at length from a recent study made by the Chamber which has not yet appeared in print. The result of this study, entitled *Training for Industrial Efficiency,* has been generously put at the disposal of the committee.

Co-operation Between Business and the Schools

"Responding to the demand for a more practical training in the schools as a preparation for industrial and commercial life, the authorities of Buffalo, under the leadership of Superintendent Henry P. Emerson, undertook a revision of the courses of study, a reorganization of the methods of instruction and the establishment of schools for special training.

"A vocational guidance committee was constituted. This committee arranged to have in each school a counsellor to influence young people to fix for themselves definite vocational aims, to help them to plan wisely their preliminary and special preparation before entering service, to direct them to employments in which the conditions were known to be favorable for their development, and to show them how to handle themselves so as to insure the subsequent development of their highest capabilities.

"The committee in charge of the educational department of the Young Men's Christian Association agreed to maintain special courses for workers, and to provide additional courses as new needs should be discovered, and to maintain such courses until the evening schools would give them.

"The Chamber of Commerce was requested to furnish information in regard to the needs of employers and the opportunities for work in those lines which are usually open to young people.

"The Board of Directors of the Chamber of Commerce recognized that if the promises for the continued industrial expansion of the city were to be realized, much would depend upon the wise handling of the human resources so that an adequate supply of efficient workers might be insured. To cooperate with these other agencies for this purpose, a Bureau of Vocational Guidance and Industrial Education was incorporated and organized March 1, 1913." . . .

"Forty-three meetings and conferences were held with educators, associations of employers, social and church workers, and visits were made to stores and factories in every line of industry.

"The statements of employers were checked up by the examination of such industrial records of workers as could be secured. Over 4,000 more or less complete records of this kind were obtained through the evening schools, the employment agencies and church committees.

"Interviews were held with workers who were seeking employment, and during the month of May and June employment was arranged for 278 workers, mostly girls and boys.

"Vocational surveys of the more rapidly growing industries were made, the available information concerning each one of the industries so studied and compiled, the summaries were submitted to persons who were well informed in regard to local conditions and their criticisms were embodied in the final revisions." . . .

"Buffalo is a manufacturing city; its prosperity will depend upon the expansion of its manufacturing industries and those commercial and transportation activities which are dependent upon the manufacturing industries, and the managers of these industries recognize that the only limit to their possible expansion is the supply of stable, skilled and intelligent workers. It is safe to assume that if the young men and women are sufficiently well prepared and energetic enough to make the difficult preparation for municipal and professional service, that they will likewise prepare themselves for no less remunerative industrial work, provided the managers of the industrial establishments will also fix definite standards of requirements and organize the machinery for enlisting the interest of prospective workers and for their adequate training for success.

"The first step in this direction is the preparation for use in the schools of a proper guide book to the industrial opportunities of the city, so that all the young people may be informed as to the requirements for success, and the prospects which are open to them in the various lines of endeavor, and the methods of using the facilities of the city for making their preparation. Such a handbook is in preparation, and the Board of Directors of the Chamber of Commerce has, with characteristic foresight and enterprise, undertaken the expense of supplying it for use in all the classes of the schools from which children ordinarily leave to seek work. To supply this need more completely the schools have provided for counsellors to further advise those pupils who must leave, and it is safe to predict that the authorities having the matter in charge will not be slow to undertake similar work for those who are enrolled in the parochial schools, and that the Department of Child Hygiene undertake to direct the six hundred or more children who annually apply to that department for employment certificates.

"To make effective the work of the school counsellors, the school department has organized a vocational guidance department, and the employers of the city can do their part toward stimulating the adoption of systematic methods for developing skilled workers through apprenticeship systems and the establishment of courses for training foremen and industrial managers in the newer phases of scientific management." . . .

"The most serious problem in vocational guidance will be to determine the possible industrial needs of a community and to forecast industrial changes. If more workers are encouraged to enter lines in which they cannot possibly find full time employment, the effect will be to increase rather than to reduce unemployability." . . .

"Any plan of co-operative training must enlist the hearty support of the business community. This co-operation is best secured through efficient service. In building up a working force, the first difficulty is in securing the right recruits for breaking into service. Can the human elements be supplied to the industrial manager according to specifications? Few managers have given enough time to the consideration of this problem to have any well-formulated specifications. Moreover, the vocational counsellor and the industrial school authorities must insist that the industry prove that it is able and willing to pay the cost of producing and delivering the potential efficiency which it expects. *The parent who rears the child, the community which educates him, has a right to expect that the outlay shall be returned during the productive period, and that the support shall be sufficient to maintain the worker in a condition of efficiency."*

UNIFORM STANDARDS OF QUALIFICATION

"The representatives of the following schools will be pleased to nominate suitable candidates for work, provided the requirements are fully specified:

"W. W. Zurbrick, 295 Carlton Street, Telephone, Frontier 5158; for the Public Schools.

"Bryant & Stratton Business College, 95 W. Genesee Street, Telephone, Seneca 914.

"Buffalo Business School, 776 Main Street, Telephone, Seneca 4189-W.

"Chown School of Business, Ellicott Square, Telephone, Seneca 870.

"Dahlke Shorthand School, 39 Erie Street, Telephone, Seneca 2336-J.

"Gregg School, Teck Theatre Building, Telephone, Tupper 4189-W.

"Hurst's Private School, Brisbane Building, Telephone, Seneca 2136-W.

"Dean of the School of Pharmacy, 24 High Street, Telephone, Frontier 337.

"Director, Albright Art School, 1110 Elmwood Avenue, Telephone, North 641-R.

"Young Men's Christian Association, 45 W. Mohawk Street, Telephone, Seneca 2585, Frontier 4525.

"The representatives of these schools have already adopted uniform standards of qualifications and have agreed that they will not recommend for employment any students who fall below these standards. To all the schools which have applied for the same, the Chamber of Commerce has furnished the official Vocational Blanks. Employers can protect themselves by requiring all those who come to them seeking their first employment, to bring applications made out on these forms, certified by the schools from which they come. The blanks are properly protected and they cannot be supplied to the schools which do not exercise proper judgment in their use."

AN EFFICIENCY BUREAU RECOMMENDED FOR STANDARDIZING

"The functions of an efficiency bureau of the Chamber of Commerce would be to co-operate with the vocational guidance bureaus of the training agencies; to supervise and direct young men and women who are in training in the industries for high grades of service; to prepare eligible lists for the service of the co-operating employers; to seek outside sources of supply when no workers can be found in the local markets and to act in a consulting capacity with employers and associations of employers who are reorganizing their methods of training and handling workers so as to bring about such uniformity of standards as to permit workers to make better preparation.

"The director of such a bureau should preferably be a man with industrial experience or special training in the newer science of business organization and factory management. Fortunately for the successes of such an enterprise such men are available."

A COLLEGE OF INDUSTRIAL ENGINEERING NEEDED

"The future of Buffalo is dependent upon the successful management of an industrial army numbering 70,000 workers, of whom over one-half are practically unskilled and many of whom have a very limited education. The present successful managers of these great regiments of workers are the survivors of the process of evolution which has evolved these larger establishments from comparatively small enterprises. Sooner or later their places must be taken by other men and there is no reason why the experts who are to handle human material, which is needed in a manufacturing establishment, should not be as well equipped for their work as those who are controlling the mechanical equipment of these establishments, or the men who are in charge of their legal departments, or of their accounting departments.

"It has been found desirable to require those who are able to handle our children in the school to take two years of special training and instruction of those sciences which relate to psychology, hygiene, school methods, school laws and school organizations; it seems that it would be equally desirable to have the shop foremen study systematically psychology, shop methods, business organization and business law. The government has long since learned that formal training must be required for leaders in the Army and Navy, and to this end it has established its schools at West Point and Annapolis.

"The ideal equipment for an industrial manager, like the ideal equipment for a successful physician, comprises a broad general training so as to enable him to understand the meaning of the work in which he is engaged; a wide practical experience as a subordinate in many different kinds of establishments, followed by an intensive study of all the problems related to industrial management. These courses of instruction should have somewhat the same relation of the foreman to the work as the courses in scientific agriculture which are given at our large universities have to the work of the farmer. Satisfactory courses of this kind should be designed for men who have a wide practical experience as workers or foremen, or who are at the time they are taking these courses, engaged in work of this kind.

"The equipment for a college of industrial engineering in a great industrial city need not be expensive. The best fields for practical work are in connection with the industrial plants of the city, just as the best clinical work of the college of physicians is, in connection with the hospitals, maintained by the city.

"The course of study for such a college would include: (1) Courses in experimental and applied psychology, covering all the problems relating to the selection of recruits for service, and the methods of handling them so as to insure their satisfactory development, and to promote their contentment, industrial stability and economic independence; (2) Courses in industrial hygiene, covering somewhat of anatomy and physiology, methods of sanitation, ventilation, the relation of fatigue to efficiency, and all problems relating to the best working conditions for the human machine; (3) Courses covering the history of the apprenticeship system and the modern developments of the same; (4) Courses in sociology, covering the standards of living, living conditions of workers, social movements, including the causes of immigration and other influences showing the mobility of labor; (5) Courses in industrial relations, showing the evolution of the modern factory system, the development of the labor unions and problems connected with the relations between employer and employe; (6) Courses in industrial law, covering the problems relating to labor contracts, employers' liability, accident insurance, factory inspection and arbitration of industrial disputes; (7) Course in factory organization, or business administration, showing the relations of different departments of an organization to each other, and the developments of proper checks upon the operations of the several departments; (8) Course in shop management, including methods of timekeeping, the principles of computing wages, routing of materials in the process of manufacture; (9) Courses relating to the distribution of products, sales management, advertising, traffic management, credits and collections. These courses to be corelated with the courses in accounting now given in the city.

"The support for a college of this kind should be as readily secured as the support of a college of physicians or dentists. This new field, which has been entered by science and in which many recent developments have been made along the lines of efficiency work and scientific management, is a field which appeals to young men in an industrial city like Buffalo, and it appeals especially to those young men who have come to the front as foremen in the departments of factories through their own force of character. They feel the need of the kind of help which they can secure from courses of this kind. It is sufficient to state that more than threescore of these young men in Buffalo, during the last year, subscribed nearly one hundred dollars apiece for correspondence courses along these lines. It will not take long for these and others to learn how unsatisfactory such courses must necessarily be. These men would be able to pay tuition for a high-grade course on these subjects.

"Meetings were held for considering this proposition by the Efficiency Club and by the representatives of the Extension Committee of the University of Buffalo, and the proposals were endorsed by the committee on Vocational Guidance and Industrial Education of the Chamber of Commerce. It was the opinion that quarters could be secured during certain parts of the week without expense in the University Building for courses of lectures of this kind and that with the exception of two or three subjects, competent specialists could be found in the city to give these courses. It was also believed that if these courses were so organized that students could elect one or several of these subjects, each to be covered in a course extending over a period of thirty weeks on one evening per week, that they could be made self-supporting on a basis of a fee of from $7 to $10 per student for each course."

ACTIVITIES OF OTHER BUSINESS ORGANIZATIONS

For a 1913 list of the chambers and business organizations which have co-operated in the eight ways first enumerated, the committee refers to Dodd and Prosser's volume on "What Chambers of Commerce Can Do for Vocational Education," issued by the National Society for the Promotion of Industrial Education. Since then much has occurred. The following is a partial list of organizations participating in the movement, by way of surveys, funds, bureaus, establishment of schools, arrangement of courses, and in other manners:

Massachusetts.	*Boston*—Chamber of Commerce. Among other things, at present practical experience in service, under the direction of the Chamber is arranged for those students who are taking advanced courses in the Hight School of Commerce. Advisory committees to various schools.
	Springfield—Board of Trade. Aided in part-time courses.
	Fitchburg—Board of Trade. Aided in part-time courses.

Connecticut.	*Bridgeport*—Manufacturers' Association. *New Haven*—Chamber of Commerce. Aided in part-time courses.
New York.	*New York City*—Chamber of Commerce. Arranged after tour of foreign inspection a system of commercial examinations to be conducted in co-operation with the school authorities. Chamber drew up resolution for memorializing New York Board of Education to appoint an advisory board of employers and employes to co-operate in the organization and administration of vocational schools, in accordance with the state law. Manufacturers' and Business Men's Association of New York have just formed a Vocational Guidance Association in Brooklyn, in co-operation with other agencies, for training and placing. *Auburn*—Business Men's Association. Vocational Guidance and placement. *Syracuse*—Chamber of Commerce. At work on plan for directing pupils from schools in preparing and securing employment for which they are best adapted. Aided in survey. *Rochester*—Chamber of Commerce. Aided in Survey. Secured co-operation between the industries and Rochester Shop School.
New Jersey.	*Jersey City*—Assisting in a Survey.
District of Columbia.	*Washington*—Chamber of Commerce and Board of Trade have co-operated in establishing a Vocational Guidance Bureau with a Vocational Analyst at its head.
Virginia.	*Richmond*—The commercial bodies aided in the recent survey.
North Carolina.	*Winston-Salem*—Board of Trade aiding Junior Association of Commerce. Aided in Survey.
Georgia.	*Atlanta*—Chamber of Commerce.
Alabama.	*Montgomery*—Business Men's Committees. Aided in part-time courses.

Ohio.

Cleveland—Chamber of Commerce. Aided in survey.

Cincinnati—Chamber of Commerce. Aided in survey, and aids in Vocation Bureau.

Hamilton—Chamber of Commerce. Arranged for co-operative classes in schools.

Dayton—Chamber of Commerce. Aided in community study.

Indiana.

Indianapolis—Inaugurating a movement to bring schoolmen and employers together to work out plans for part-time education. Industrial survey contemplated. Planning visit to Indianapolis concerns for members of State Teachers' Association during convention next fall.

Richmond, Indiana Harbor, East Chicago—and other cities investigating the needs for vocational education. Entire state of Indiana is carefully being worked over by co-operative efforts of committees of the Chambers of Commerce.

Illinois.

Chicago—Supervising the after-care of young workers by an office supported by the Association of Commerce. Chicago City Club Survey; other activities.

Bloomington—Aided in bond issue in the interest of Vocational Education.

Michigan.

Grand Rapids and Lansing—Junior Associations of Commerce.

Detroit—Recreational survey of city, primarily to show the needs and requirements of children and young men and women engaged in factory life.

Iowa.

Sioux City—Commercial Club aided in survey.

Burlington—Iowa Commercial Exchange.

Aided in part-time courses.

Kansas.

Topeka—Aiding in survey, in part-time courses.

Texas.

Stamford—Commercial Club. Aided in part-time courses.

Colorado.	*Pueblo*—Commercial Club. Vocational Guidance and placement.
California.	*Pasadena*—Merchants' Association co-operating in Vocational Bureau.

2. TYPICAL COMMUNITIES

California—As an example of the get-together of business groups and the schools to study the problem, we quote from a newspaper report of Oakland, California, under date of January 8, 1915.

"League to Study Needs of the Employed: Training for Workers is Idea of State Campaign.

"That the manufacturers and merchants of Oakland and the bay district may gain an increased efficiency among their employes and that the children of the public schools may have the opportunity of gaining an active knowledge of the trades and professions which they are later to follow, is the aim of a widespread move which was inaugurated at a luncheon of the Home Industry League in the Palace Hotel, San Francisco, at which more than 150 of the leading retailers and manufacturers of the bay region were present.

"Among the speakers at the luncheon were Professor Charles L. Jacobs, director of vocational guidance at the University of California, superintendent of the department of manual arts in the San Jose school department, and Dr. E. R. Snyder, head of the California State Commission of industrial and vocational training.

"The move, which will later include the entire industries of the State and which will be given its first workout in Oakland and San Francisco, will embrace all of the retail and manufacturing concerns of the bay cities. In order that a uniform table of data may be procured Professor Jacobs has drawn up a set of questions which are to be filled out by the various business heads.

" 'The State board of education has taken this matter up in dead earnest and will present a strong vocational training bill at the legislature this year,' stated Dr. Snyder, 'and there is no reason why California cannot rank first among the States in this respect.' "

Rochester, New York—A recent letter from Rochester enumerates the following activities of the schools for raising the standards of preparation for entrance into the industries:

"Replying to your letter of April 14th, regarding the vocational guidance movement in Rochester, we do not have a vocational guidance bureau, so called. We are, however, doing considerable work by means of vocational counsellors in our schools and information given out regarding the various industries.

"In 1912 a survey was made of three industries: the woodworking, machine and clothing. Since that time surveys have been made of the dressmaking and millinery trades, collar making, shoe industry, cigar making, paper box making and perfumery trades.

"We have agreements with the following industries: machine working, woodworking, electrical, plumbing, printing, clothing, bakers, and laundrymen. Our agreements call for a tryout course to determine the fitness of the boy or girl for the particular trade. Then a two years' trade course is given for the particular trade, one half of which is spent in shop practice and one half in correlated subjects, after which the employers agree to take boys and girls at a specified wage with a regular yearly increase, and in some cases a bonus of $100 at the expiration of two years.

"We have also a part-time agreement with one of the button factories, whereby girls attend school one half of every other week and work in the factory the balance of the time.

"Recently we sent letters to over three hundred employers asking them to co-operate with us in keeping boys and girls in school. Our method of doing this was to have them give a card stating that they employ boys and girls under 18 years of age only recommended by the Board of Education. This card is given to the applicant, and as a rule he or she comes to the office and the use of a trade education and the certainty of a job afterwards are explained. As a result 79 boys and girls have returned to school.

"Regarding question No. 6, we have a child study laboratory under the direction of Miss Edith A. Scott. Under this department are placed all of the deficient, subnormal, abnormal, and special pupils. The Binet study of testing is used to a large extent."

It will be noted that the above system aims merely to aid young men and women in entering the world of work with some preparation for it, and it is fitting that some organized effort—in this case the educational system—is attempting to safeguard this step, whether wisely or not remains to be seen. But once the worker passes the age over which the school has jurisdiction, he must work out his own salvation, except in case of affiliation with labor organizations, and they do not comprehend the majority of those at work. There is no organization analogous to the educational system for watching the progress of the adult in his daily task and seeing that the intelligent, industrious and meritorious are being given opportunity to exercise and develop the talents which they may possess. Here is where the employer should take the initiative and so far as possible, by close study and analysis of his own organization and of the potential abilities of his men, should avail himself of the opportunity to bind these men to him by giving them the chance to learn his business and to supplement this knowledge by further study. This will mean an enormous extension and differentiation of adult educational machinery, but we are committed to it; and once differentiated vocational education becomes general and nation-wide, the next logical step will be to provide similar opportunities for grown men and women.

3. SURVEYS—VOCATIONAL, INDUSTRIAL, AND OCCUPATIONAL

(Completed, in progress, or contemplated)

These surveys are in cases local, State, and national, and have been, or are being, made by various bodies—educational, commercial, governmental, and philanthropic, often in collaboration with each other. Frequently the public schools and the Chambers of Commerce conduct the local surveys, but the Y. M. C. A.'s, Consumers' Leagues, the Society for the Promotion of Industrial Education, the Russell Sage Foundation and the Government have been instrumental in conducting others or assisting therein. In some instances they may be an attempt to take stock of the various opportunities or work conditions existing in a particular locality; in others, an effort to investigate a particular occupation or trade. By far the greater number are local, and do not cover all the industrial and commercial life of a city, but necessarily have made their beginnings in the more important industries of the locality. With legislation for State systems of vocational training a few surveys of States have appeared and the necessity for national stock-taking, especially for particular industries, is being championed and work has been begun by at least one national society.

The following list lays no claim to completeness:

LOCAL

Massachusetts—
- Boston.
- Somerville.
- Holyoke.
- Waltham.
- Worcester.

Connecticut—
- Bridgeport.
- Hartford.
- New Britain. (Contemplated.)
- New Haven. (Contemplated.)

New York—
- Buffalo.
- New York City.
  - At present: Building and metal industries.
  - Surveys being made incident to establishing co-operative courses.
  - Russell Sage Foundation—various trades.
- Poughkeepsie.
- Rochester.
- Syracuse.
- Troy.

New Jersey—
- Jersey City.

Pennsylvania—
- Duquesne. (Y. M. C. A.)
- Pittsburgh.
- Philadelphia.
- Reading. (Contemplated.)
- Scranton.

Virginia—

Richmond. Large scale: By government (1) United States Bureau of Labor Statistics; (2) Society for the Promotion of Industrial Education; (3) Russell Sage Foundation; (4) local bodies.

Kentucky—

Louisville.

North Carolina—

Winston-Salem.

Arkansas—

Little Rock.

Louisiana—

New Orleans.

Ohio—

Cincinnati.
Cleveland. (Being made.)
Dayton.

Indiana—

Indianapolis. (Contemplated.)
Terre Haute.

Illinois—

Chicago. (City Club Survey, Women's Clubs, others.)
Peoria. (Being made.)
Springfield.

Michigan—

Grand Rapids.

Minnesota—

Duluth.
Minneapolis.

Kansas—

Topeka. (Being made.)

Missouri—

Kansas City. (Contemplated.)
St. Joseph. (Contemplated.)
St. Louis. (Business Men's League considering.)

Iowa—

Sioux City.

Utah—

Salt Lake City. (Contemplated.)

California—

Oakland.

Oregon—

Portland.

Washington—

Seattle.

STATE

Ohio—

State School Survey.

Illinois—

State School Survey.

Missouri—

Report on industrial education for the State, with a proposed law. Inquiry also to business men. State Teachers' Association, 1914.

Iowa—

Survey and preliminary report on vocational education and vocational guidance. Iowa State Teachers' Association, November, 1914. Survey of industrial history of 800 Iowa boys in relation to problems of vocational guidance. State University of Iowa, 1915.

NATIONAL

The Russell Sage Foundation, besides making surveys in Newburgh, Pittsburgh, Scranton, Chicago, Cleveland, and Springfield, has investigated constant and variable (constant, growing, and decaying) occupations in the United States, and conditions affecting problems of industrial education in 78 American school systems.

The National Society for the Promotion of Industrial Education, which has assisted in the surveys at New Orleans, Cincinnati, and Richmond, and in the survey of women's and girls' work in Troy, Grand Rapids, Philadelphia, and New York, is interesting itself at present especially in investigations in the Dress and Waist Industry in various centers. In New York, plans for a part-time factory school in this industry were drawn up and presented to the organized employers and to the union. This society early published an able study on the boot and shoe industry.

The United States Bureau of Labor Statistics published information in regard to various industries, especially in the series on wages and hours. It has recently issued a study on the cloak, suit, and skirt industry (the protocol industry), with plans for apprenticeship for cutters and the education of workers in the industry.

Miscellaneous Agencies Engaged in Surveys

The Minimum Wage Commission, in the States where they exist, are beginning to publish investigations into the trades that are most likely to be regulated. Likewise, much miscellaneous material of value will be found in many of the reports of the various State bureaus of labor or factory inspection.

The Consumers' Leagues make local investigations; cf. especially that of East Pennsylvania, which has made surveys in the telephone industry, box making, etc., in Philadelphia.

The Women's Educational and Industrial Union of Boston has done signally good work in investigating conditions of work for women in Massachusetts. Besides making a number of industrial studies, especially with reference to the kind of vocational training needed in certain manufacturing centers, they have recently published a study of opportunities in secretarial work based on the experience of a block of trained women who have come under their observation.

Importance of the Survey Movement for Business Men

With this whole movement for specific training for life work which has been agitating this country for the last five years; with the beginnings of schools for vocational education and the reorganization of educational systems and methods which are now going on; with the prospect of government lending enormous aid, by way of funds, to this movement; and because of the fact that no new type of school is established without some sort of preliminary industrial survey of the community in order to ascertain what the needs for training and guidance are (the United States Bureau of Education recently reported as having found 89 schools in communities that have had a vocational survey as a basis for their work), there is a widespread inquisitiveness to know not only how the industries want youth trained, but also what industry offers. However, since the supervision of our educational system, at the best, ceases with those who are sixteen (except in the case of illiterate adults, in Massachusetts), these school surveys have for the most part as yet only scratched the surface of inquiry, and in most cases are concerned primarily with keeping children out of blind-alley jobs, and in keeping them in school a little longer, so that they may be better able to make their way when they do go out. In most cases while analysis of industries exist, for the most part little attention has been paid to individual business organization within, to investigate quantitatively and qualitatively promotion and the requirements for the more favored positions—not merely those spectacular ones at the head, nor the pathetic instances of the bottom—but the rounds of the ladder from the hand worker on. Now anyone who can see the drift of this inchoate movement, which has not as yet sensed its own significance and goal, cannot fail to see that after enough preliminary grasp has been gotten in a nation-wide way on the opportunity of the various trades, and after the new educational machinery is under way, that the next logical step will be to take up the problem of the adult in industry; to attempt to analyze your higher positions and what they have to offer, and what qualities they require. This is a movement which the higher institutions and professional schools should have led in, but very little outside of rule of thumb has been done. We might say in passing, so far as scientific method is concerned, that a preliminary survey of the metal trades in New York City, carried on by Mrs. Alice Barrows Fernandez, attempts a scientific analysis of the fundamental processes in the metal trades, and an exact detailed classification of occupations therein. In this study the assumption is made that behind the similarities and differences of specific processes, there are underlying principles common to them all, and a first-hand study of many varieties of machine tools and machines has revealed, the investigators say, the fact that in every case these principles are present, but often in such different form that they are not easily recognized, or often so concealed that they are not apparent to the ordinary worker. Although it will take at least two years more for the completion of this survey, the goal of it—searching after principles—seems significant; and the committee suggests that the same be done among the corporate members of The National Association of Corporation Schools, especially for the higher positions. It would pay to analyze scientifically the roads to promotion. In this connection we shall repeat what was said by one of the members of this Association, Mr. W. R. Heath of the Larkin Company, at the first annual convention:

"It is not A's system or B's system that we want, but fundamental principles, standard operations and standard expressions of conditions, so that a national bureau could put its official seal of solvency on any business by the means of like standard operations of check and audit.

"We ask all these experts [efficiency experts] to come together in solemn convention and pool their experiences and pronounce certain fundamentals to which they will all subscribe, adopt certain standard operations by which these fundamentals may be applied to any business, and agree upon certain standard forms, precedents, and diagrammatic charts by which the conditions of any business may be shown. . . ." (*Proceedings,* First Annual Convention, pp. 213, 214.)

There is every indication that the inquiry into work conditions will increase, especially from outside agencies, in view of impending national stimulus to training for entrance into occupations.

The Federal Commission on National Aid to Vocational Education, in its report to Congress, has recommended that an appropriation to the amount of $200,000 a year be made to a Federal board to serve as a clearing house for the different Federal departments and bureaus in making studies, investigations, and reports for use in vocational schools. Already this co-operation appears to have begun. The commission points out that the studies for use in trade and industrial education should include the investigations of trades, industries and apprenticeship, the classification of occupations and operations, and the analysis of processes and the requirements on workers.

Secretary Redfield, in his excellent address before the second annual convention of this Association, in which he very thoroughly discussed the need for occupational surveys preliminary to training (*Bulletin* No. 5, July, 1914, pp. 32-35), stated:

"Before organizing schools for any industry we should be in a position to know how far such an industry can be reorganized so as to give the required training within the industry itself. In the whole field of industry no task is more urged to-day than a comprehensive study of occupation for purposes of training. Your Association could perform no more important service to the *industries of this country than to lead the way in this work.*"

Moreover, the business men themselves need this information as badly as the public, and our census is beginning to give us better occupational information, although the millennium has not been reached in this respect owing to the intricacy of the problem involved and the difficulty of throwing over the older system for purposes of comparison. However, the former Director of the Census, before leaving office, informed the Chairman of this Committee that possibly an analysis of occupations and processes would be made in the next census.

4. BUREAUS OF VOCATIONAL GUIDANCE

(*Public and Private*)

For the most part these are maintained between the public schools and the commercial interests.

Massachusetts—
- Boston.
- Cambridge.
- Worcester.

Connecticut—
- Hartford.

Rhode Island—
- Providence.

New York—
- Buffalo.
- Rochester.

Solvay.
Utica.
Yonkers.

Pennsylvania—
Philadelphia,
Pittsburgh.
Reading.

District of Columbia—
Washington.

Alabama—
Birmingham.

Ohio—
Cleveland.
Cincinnati.

Illinois—
Chicago.
Peoria. (Being formed.)

Michigan—
Detroit.
Lansing.
Grand Rapids.

Minnesota—
Minneapolis.

Missouri—
Kansas City.

Iowa—
Des Moines.
Sioux City.

Kansas—
Salina.
Topeka.

Nebraska—
Lincoln.

Colorado—
Pueblo.

Utah—
Ogden City.

California—
Pasadena.
Sacramento.

Y. M. C. A.'s

Boston.
Bridgeport, Conn.
Providence, R. I.
New York City.
Brooklyn.
Buffalo.
Indianapolis.
Chicago.
Detroit.
Minneapolis.

Besides the specific work in vocational guidance enumerated above, the whole Y. M. C. A. movement is of much importance as offering opportunities for supplementary education and training to those who are working; maintaining employment agencies, and endeavoring to guide the whole man—physical, mental, and moral, and offering facilities for so doing. In addition, they help in vocational surveys.

PUBLIC EMPLOYMENT BUREAUS

In a few known instances the State employment bureaus are giving attention to the problems of vocational guidance, especially with reference to juveniles.

Wisconsin—The Wisconsin Industrial Commission has power by law to aid in inducing minors to undertake promising skilled employments and to regulate apprenticeship and has been developing the extension of apprenticeship in the State. For this reason its system of State free employment offices has been interested in the problem, and the former director of these offices having significantly emphasized the problem of proper entrance and guidance in employment from the experience of the misfits coming to these offices.

Ohio—At Cleveland the State-City Free Labor Exchange has taken over the function of guidance. It has a Girls' and Women's Bureau, with a woman director over it.

Indiana—The State Free Employment Bureau at Indianapolis has gathered statistics relating to the number of boys placed, kinds of situations, etc. State free employment bureaus at other centers are placing boys and girls.

Colorado—State Free Employment offices have statistics referring to jobs obtained for boys and girls.

New York City—Municipal Employment Office. At the invitation of the Mayor's Committee on Unemployment and others specially interested in helping minors vocationally the director of the Vocation Bureau of Boston is giving alternate weeks until July in organizing a system of vocational help to minors.

Massachusetts—The State Free Employment Office at Boston has touched this problem through its Boys' Department.

In the Federal plan for the prevention of unemployment submitted by the American Association on Unemployment (affiliated with the American Association for Labor Legislation), there is recommended in local employment exchanges specific department for vocational guidance, to co-operate with school, health, and industry, to place workers where they will have a chance. For adults transfer to different operations and processes is advised.

Besides these public bureaus, there are two private philanthropic bureaus doing specific placement and guidance: The New York Alliance Employment Bureau, for juveniles, which has published handbooks on trade opportunities, and the Schmidlapp Bureau for Women and Girls in Cincinnati.

5. VOCATIONAL GUIDANCE IN SECONDARY SCHOOLS

Recent information from the United States Bureau of Education states that nearly 4,000 public high schools report that they are sufficiently concerned in the future of their boys and girls to talk to pupils with regard to vocations; 2,290 claim that they go a step further and have outsiders come in and talk on the various occupations. By elimination of the most obvious errors and misinterpretation, the Bureau continues, 111 high schools claim to help their students to select a vocation by a system of trial vocational courses—the plan that Mr. Wirt is trying to introduce into the New York schools, 115 schools have access to a vocation bureau or some similar organization and 89 schools are in communities that have had a vocational survey as a basis for vocational guidance. The States making the largest returns are California, Illinois, Massachusetts, New York, and Pennsylvania. It seems reasonable to say that probably 100 high schools, representing about 40 cities, now have definitely organized, conscious plans of vocational guidance through vocation bureaus, consultation committees, vocation analysts, trial vocational courses, systematic visits to industrial plants, or regular courses in vocations.

From replies to questionaires sent out to a number of school systems we find activities under the following headings that were asked for:

1. Vocation bureaus.
2. Vocational counsellors in schools.
3. Placement work.
4. Surveys.
5. Co-operation with industries.
6. Tests for ability—psychological or otherwise.

There seems to be in the educational world the same feeling of necessity for scientifically testing capabilities of boys and girls (other than by formal school work) that pervades industry, but the method is yet to be supplied. For this reason prevocational courses, feeling one's way through English courses, talks by experts to stimulate interest in vocational life, self-analysis and other methods have been and are being tried. There are a few instances of psychological tests for abilities. The Superintendent of the Somerville, Mass., schools recently expressed this groping to the Chairman of this Committee in the following words:

"Throughout the school organization there is an earnest desire to help children to succeed in life by finding out what is best for themselves. I have no doubt that the sum total of efforts as the result of this feeling would be significant and surprising if there were any way of apprehending it."

In this connection a continuous study of high school students in Somerville has been made. The original investigation comprehended 2,000. Other centers reporting tests other than psychological are: Springfield and Holyoke, Mass., New Britain, Conn., New York City, Tampa, Fla., Grand Rapids, Mich., Duluth, Minn., St. Joseph, Mo., and there are doubtless many others.

PSYCHOLOGICAL TESTS

The best known and most continuous study has been done at Cincinnati, under the leadership of Mrs. Helen Thompson Woolley, Director of the Cincinnati Bureau of Vocational Guidance, in measuring the effects of work on children passing through the employment certificate office. There has recently appeared the first report of this five-year study of working children (begun in 1910, under the auspices of the Board of Education) under the caption "Mental and Physical Measurements of Working Children," a ponderous tome of 247 pages issued by *The Psychological Review*. It is understood that Mrs. Woolley is to perform a somewhat similar service for a group of New York City children.

Philadelphia is conducting an interesting experiment at the Girls' Night High School, where the overcrowded Commercial Course tests the capacity of the building. On this account a series of psychological tests were begun. only this year to select those students for the course who show some ability to carry it on.

Other centers reporting psychological tests are Troy, N. Y., Kansas City, Mo., and Louisville. The latter city states specifically that it is testing for capacities, aptitudes and tastes.

6. VOCATIONAL GUIDANCE IN COLLEGES AND UNIVERSITIES

It must be recognized that there are many vocational courses whether recognized *as such* or not, given in the higher institutions, and some of these are frankly vocational, but the vocational guidance movement as such has just begun, with isolated exceptions, to agitate academic walls throughout the country. In this work the State universities are taking the lead, and outside of the purely professional departments or schools, which are nearer to the conditions on the outside than are the purely academic branches, the women, with new-born solidarity, are taking the initiative in this movement. Talks on vocational opportunities are being given rather generally, to both men and women. However, vocational conferences have been held by the women in the Universities of Michigan, Wisconsin, and Minnesota, and the Universities of Wisconsin, Minnesota, and

Montana have published handbooks of opportunities for training for professional careers for their women students. To further indicate the attempts of college women and their sister graduates to make a scientific selection of a career, the Women's Educational and Industrial Union, Boston, Mass., which is the pioneer in this work in the United States, furnishes the services of its Vocational Counsellor to Smith, Radcliffe, Wellesley and Mt. Holyoke. (The Union is also giving a training course for general vocational counsellors this year.) At Oberlin, O., a Vocational Secretary for Women has just been appointed and there are doubtless others. Toledo University is planning a night department for the further training of business women and working girls in which employers will co-operate in placing them.

The women graduates embraced in the Association of Collegiate Alumnæ have been instrumental in establishing or lending their support to a series of occupation bureaus in various cities, advising and placing for trained women. They exist at Boston (Women's Educational and Industrial Union), New York City (Intercollegiate Bureau), Philadelphia, Richmond, Va., and Chicago. Committees have furthered the work in various ways at Los Angeles, Columbus, Ohio, Detroit, besides in the college centers. The purpose of the Intercollegiate Bureau of New York is to investigate the present conditions of women's work, to develop new opportunities, and to secure positions for educated women in pursuits other than teaching. In connection with developing new opportunities something of a furore was made when within the last few months college-trained women from this Bureau took up positions as demonstrators of automobiles and one exceptionally able woman from New York City took charge of an administrative division for marketing a well-known car. In similar vein this bureau has collected more than 1,000 schedules from successful women in practically every important occupation now employing college women.

Turning aside from the especial activities of women, we find the features in the universities for the most part as follows:

1. Vocational Conferences.
2. Counsellors or Bureaus.
3. Modifying Entrance requirements of curriculum in the light of vocational guidance principles.

4. Checking alumni's career in the light of courses taken as a student.

5. Tests for ascertaining abilities, aptitudes, etc., psychological or otherwise.

6. Publications on vocational guidance or allied subjects.

7. Courses in vocational guidance; guiding, counseling.

8. Giving opportunities for further training to workers (both line and staff) through extension courses, technical, commercial, etc.; by correspondence, lecture, or shop instruction.

We have made only a cursory canvass of the activities of colleges and universities, but shall report what some of them are doing.

The University of California has a director of vocational guidance.

Courses in Vocational Guidance have been given at different times or are being given at Boston University, Brown, Chicago, Columbia, Harvard, Pennsylvania State, Missouri, Wisconsin, Minnesota, Montana (at least three of its faculty give extension courses on this subject), and Reed College (Portland). Nearly a score of colleges, universities and other institutions are said to be conducting special or part-time courses in Vocational Guidance. The Amos Tuck School of Business at Dartmouth announces a course for next year on Employment Management, to be conducted with the aid of the Boston Employment Managers' Association.

The State University of Iowa has recently conducted a survey into the industrial history of 800 boys in the State in relation to the problems of vocational guidance.

STUDYING ALUMNI'S CAREER

This has been done in a number of instances. Dean Keppel of Columbia has published a study on "The Occupations of College Graduates."

PSYCHOLOGICAL TESTS

One feature of particular interest to the Association is the series of psychological tests which are being conducted to size up students.

Chicago University. College of Commerce and Administration conducts psychological tests for entering freshmen, and these tests repeated every year for those who took them in the freshman year. System three years old.

Carnegie Institute of Technology, Pittsburgh. Psychological tests in the four schools have been carried on, and they will be continued. The practical aspects of the following tests are significant:

(a) Tests for (1) strength and endurance of grip.
Tests in (2) setting up simple machines.
(3) speed in lathe work.
(4) judgment of dimensions, as shown in cutting metal.
Tests for (5) fatigue.

Reed College. Compiling results of psychological tests which have been given to all students.

Universities of Kansas (for prospective teachers), Montana, Utah (beginning), and Southern California report that they are making psychological tests.

It is believed that both Dartmouth and New York University have put some of their students under psychological tests, but we have not learned of the nature of these experiments.

Pennsylvania State College will begin to examine all freshmen next fall.

Attention should be called to the service which the well-known psychologists in the universities are rendering to business in the field of industrial psychology.

EXTENSION WORK

A pamphlet on Extension Work in the United States has recently been issued by the United States Bureau of Education from the pen of Dean Reber (Wisconsin).

In reaching the man or woman in industry or business a few instances will be given:

Wisconsin. Among the 5,786 students enrolled in the University Extension during the last two years, 317 occupations are represented. The continuation, vocational and industrial education of the State forms an important part of the work of the Extension Division. The latter co-operates in supplying teachers and texts, and in meeting pupils in the continuation schools. It gives seventy courses in engineering alone (has a corps of eighteen instructors devoting entire time to same), and wherever possible students are organized in classes. The State is divided into six districts, with representatives, itinerant instructors, in each.

Wisconsin also offers courses in business organization and management. The establishment of local classes has been most pronounced in connection with engineering work. Classes have been formed in shops and factories and short courses offered at a number of colleges and universities.

Pennsylvania State College has entered upon a systematic campaign of extending industrial education, in co-operation with the Central Y. M. C. A. of Philadelphia, for cities throughout the State. The college provides the lessons and the Y. M. C. A. secures an instructor who meets the group under his weekly guidance. Notable work in engineering also done by the universities of Kansas, Colorado, Minnesota, Oregon, and Montana State College.

Some of the work done in the East, especially along commercial lines and at night, should properly be included under Extension.

Columbia is offering a series of courses intended to equip students for the position of Executive Secretary. Her new night courses would come under this head, as well as the schools of commerce of the Universities of Pittsburgh, Cincinnati, Boston University and New York University. At the beginning of this year the director of the efficiency bureau of the School of Commerce recommended the establishment of a vocational bureau at the University in order to bring students into closer touch with business men, and we are under the impression that co-operation has recently been made.

Finally, it should be noted in connection with the higher institutions that there is an agitation in the whole educational world, down to the kindergarten, about the intrinsic value of many studies—if not nearly all studies—which were never seriously questioned before. "Do certain studies give the qualities claimed for them, and do they really prepare for life work?" is being asked on all sides. No doubt much good will come out of this challenge from the world of work, but it will take much serious thought, self-evaluation and effort on the part of both education and industry to make these readjustments, but gradually changes in curriculum, recognition of vocational studies, unit courses, and what not, are forcing their way into the halls of learning. In this connection reference is made to the penetrating *Report* of the Massachusetts Board of Education for 1912-13, in its discussion of the intrinsic value of certain high school subjects.

7. ASSOCIATIONS INTERESTED IN VOCATIONAL GUIDANCE—NATIONAL, STATE, LOCAL

The following is a partial list of important associations connected with the vocational guidance movement:

The National Association of Corporation Schools (two conventions).
National Vocational Guidance Association (four conventions).
Society for the Promotion of Industrial Education.
National Educational Association (Committee on Vocational Guidance).
National Association of Manufacturers (Committee on Industrial Education).
National Metal Trades Association (Committee on Vocational Education).
Chambers of Commerce.
United States Commission on Industrial Relations.
American Federation of Labor (Committee on Industrial Education).
Various employers' and employes' associations; the trade unions.
American Association for Labor Legislation.
American Association on Unemployment.
National Child Labor Committee.
National Women's Trade Union League.
Consumers' Leagues.
General Federation of Women's Clubs (Committee on Vocational Education).
Association of Collegiate Alumnæ.
Vocational Education Association of the Middle West.
Librarians' National Association.
Young Men's Christian Associations.

Russell Sage Foundation.
State Commissions on Industrial and Vocational Education.
State Teachers' Federations.
State Industrial Commissions and Bureaus of Labor.

MEDICAL

Especially in the following fields:

- (a) Eugenics.
- (b) Public health—preventive.
- (c) Industrial hygiene and occupational disease.

American Medical Association.
National Association for the Study and Prevention of Tuberculosis.
State Boards of Health.
American Social Hygiene Association.
Countless local organizations.

The Commission on National Aid to Vocational Education. Report, 1914. The Federal bill not yet passed, but will probably go through.

8. SUMMARY

By way of brief summary, it may be said that the Vocational Guidance movement in its relation to industry represents in the United States an evolution through four different phases, the last phase being by no means generally recognized and each stage existing side by side with the others. They may be characterized as follows:

A. *Vocational Guidance of Youth.*

1. Preliminary step to industry.
   Bringing vocational information (and incidentally some vocational education) to the child. Best examples: Work in Boston under Parsons and the Vocation Bureau, and in New York City.
2. The critics: What does industry offer the child?
   Mrs. Alice Barrows Fernandez, in her Vocational Survey of New York, opened up this inquiry in a nationwide way.
   Mrs. Woolley of Cincinnati, in testing psychologically for the effects of work on the child.

B. *The man and the job.*

3. Selection of employe to fit position.
   Static.—Analyzing the position and the individual.
4. Selection of position to fit employe.
   Dynamic.—Human interpretation. The person and his qualities. Involves rotation and promotion of the worker. Behind this movement is also the desire for the regularization of industry and partial cure for unemployment.

IV. CHARTING PRACTICABLE OPPORTUNITIES

This section of our report will be confined largely to what is being done among the membership of our Association.

It was of course recognized that nothing short of a first-hand investigation, with freely given co-operation, would bring to light the details of the various activities carried on among our members which may accurately be considered as features of Vocational Guidance, whether recognized under that name or not; but in the hope that something of value might be gotten by written inquiry, the following list of questions, on request, was submitted by the Committee on Vocational Guidance to headquarters on January 14th of this year:

VOCATIONAL GUIDANCE QUESTIONAIRE

I. Vocational Guidance—General

1. Are you associated in any way with any organized effort, bureau, school, or association in behalf of Vocational Guidance?
2. What is your conception of the relation of vocational guidance to (1) employment agencies; (2) school systems; (3) business associations (such as Chamber of Commerce, etc.)?
3. In problems of guidance, preparation for employment, and placement, are you in co-operation with the schools and placement bureaus, if any, in your community?
4. In methods for discovering capacities, aptitudes, tastes,

etc., are you prepared to co-operate with promising psychological aids?

5. In order to prepare for the difficult problems of vocational advice and counsel are you ready to co-operate with others in your community for the wise training of vocational counselors?

II. VOCATIONAL GUIDANCE IN INDUSTRY

A. *Labor Engagement, Promotion and Discharge.*

1. Have you an employment bureau? If so, how organized?
2. What are your labor engagement methods? Do you advertise? Employ outside agencies? What questions are asked when taking on employes? Do you use printed application blanks?
3. What are your methods of trying out men?
4. Do you keep personal records?
5. Is a study made of the personal characteristics of each employe—health and physical characteristics, intellectual ability, manual ability, attention, memory, type of activity, leadership?
6. What qualities in applicants do you specially desire and look for?
7. How do you determine whether or not the applicant possesses these qualities?
8. What qualities do you especially wish to avoid? How do you determine whether the applicant possesses such qualities?
9. How do you acquaint your employes with opportunities for promotion?
10. Do trade unions affect your gradation of laborers and their advancements?
11. What are your methods of remuneration?
12. What particular methods of reward have you for intelligence, generosity, energy, loyalty?
13. What are your methods for overcoming carelessness, laziness, jealousy, selfishness, and fear?
14. What are your methods of discharge and in whom does the power of discharge originate and where is the power of final discharge lodged?

B. *Guidance in Physical Welfare.*

1. What rules and regulations have you for the conservation of the health of your employes?
2. Does your company employ physicians for the examination of officers and employes?
3. If so, does your physician make all examinations?
4. If not, are the certificates of private physicians accepted?
5. Are company physicians allowed to have private practice among employes?
6. Are all persons entering your services given a physical examination and are physical examinations made at stated periods?
7. If so, indicate briefly the scope and thoroughness of such examination.
8. Do you employ a trained nurse?

C. *Vocational Guidance and Adaptability.*

Do your employes have presented to them the conditions and needs of varied work opportunities in order to test their versatility?

1. By addresses from experts in the various departments?
2. By personal investigation and study throughout the works?
3. By trial vocational courses to discover tastes and aptitudes?
4. By means of vocational pamphlets or reports based on careful investigation?
5. By means of industrial excursions to other plants?
6. By direct vocational counseling by any individual?
7. By any other means?
8. Have you drawn up any complete system of work for a vocational counselor within your business?
9. Do you use some form of questionaire to discover the special aptitudes of employes?
10. Do you use the principles of physiognomy or phrenology?
11. Do you use educational tests to determine different types of knowledge?
12. Do you use any psychological tests to determine mental qualities?
13. How far do you rely upon those who are in a position to observe the traits of the candidate for promotion?

14. Have you made any special provision for recording the efficiency, the merits and demerits of your employes?
15. Do you keep a continuous record of each man, checking him from week to week in regard to discipline, attendance, punctuality, industry, initiative, etc.?
16. If so, who makes the original record, and who rechecks this record?
17. Are you satisfied that the records are an efficient means whereby to determine the merits of an employe?
18. Does your system depend largely upon the immediate superior and are the records therefore affected by the intelligence and personal likes and dislikes of foremen and department heads?
19. Does one high executive or a committee have charge of the records, supervise their keeping, and pass on the promotional merit of an employe at stated times?

D. *Executive Guidance.*

1. What are your methods of selecting executives?
2. Have you any standard plan of salary promotion for employes other than skilled and unskilled laborers? Please describe plan.
3. Have you charted these opportunities?
4. What results have you derived from interdepartmental committee systems?
5. Do you strive to develop cumulative efficiency by evoking and rewarding initiative, individual courage, etc., by those immediately below those in positions of first responsibility?
6. Is your executive staff so organized that executive power flows harmoniously through the different administrative channels on the basis of personal fitness?
7. Is each individual executive within his proper sphere held responsible for the application of sound principles in every emergency?
8. The first requisite in the executive is the power of wise decision. What do you do to develop this power in your entire executive staff?
9. What special methods are used in developing a genuine co-operative spirit among your executives?

10. Are any special efforts made to introduce the elements of joy and play into the routine work tasks?

E. Guidance in Selecting Salesmen.

In selecting salesmen we wish to know what it is under each of the following items that is particularly looked for and desired:

1. Previous history:
   a. School record.
   b. Experience (other than selling).
   c. Selling experience.
2. Personal appearance.
3. Physical condition.
4. Intellectual ability.
5. Moral qualities.
6. Will power.
7. The rate of improvement in efficiency that may be expected.
8. The conditions that favor the use of judgment.
9. The relative merit of different motives to action.
10. The causes of slumps in the efficiency of an individual.

III. EXPERIMENTAL PSYCHOLOGY

Have you tried any experimental psychology tests in connection with such problems as:

1. Methods of improving the memory.
2. Training in more regular and accurate attention.
3. Increasing the rapidity and accuracy of repeated actions with the least nervous wear.
4. Education of delicacy of touch and sight for specific purposes.
5. The utilization of rhythmic tendencies.
6. Scientific balance of work and rest.
7. Influence of social co-operation in gang labor.
8. The effects of different quantities and kinds of remuneration in evoking and maintaining the various factors of efficiency.
9. A study of different types of ability, such as ability to know work needs, and ability to do different kinds of work.

IV. PLACEMENT BUREAUS

1. Has your community a placement bureau?
2. If so, does your plant co-operate in placement work?
3. Do any trade or commercial organizations in your community assist in placement work?
4. Do you secure employes through placement agencies?
5. How is the placement bureau financially supported?
6. Does it publish bulletins of work opportunities?
7. Does it follow up employes placed?
8. Is there any specially organized vocational guidance in your community for foreigners?

In reply to the questionaire sent out for this Committee by the officers of the Association there were 58 responses, which are compiled in the following table.

Judging from the replies it seemed to the Committee that for our purposes the features most promising for further study were (1) deliberate training for promotion; (2) methods of promotion; (3) method of selecting executives and also those lower down; (4) trials in other work; (5) systems of tests used in analyzing abilities; and (6) the functioning of interdepartmental systems. We wish that the questionaire method were adapted for bringing out detailed descriptions of how these very interesting phases of organization are carried on among the individual firms listing them, but unfortunately in most instances the information came that they merely were or were not used. However, as several Class A members were good enough to describe in detail features of their business which, in our opinion, are of great importance, we shall insert them for the benefit of the other members of this Association.

TRAINING OF EXECUTIVES

In order to increase versatility, the firm reporting the following experiment has an educational scheme for their general foremen, foremen, assistant foremen and a department known as the "flying squadron," who are the pick of the employes throughout the plant and who are taught all the operations in the plant.

A course in Organization and Management is being given to 25 foremen in the plant, which was started September of last year. Two hours per week is devoted to the course, which will last six months from the time it is started. Beginning with the fundamental principles of economics and leading up to manufacturing organization in general, the general structure of the organization of this particular firm is taken up, including the financial sales and factory divisions. Special emphasis is laid on the factory organization, and at the present time the duties and methods of each department are being studied so that at the completion of the course it is hoped that the foremen will have a good idea of the forces which operate in general in business and those which are operating especially at the plant in question.

The "flying squadron," it appears, is given two courses, one in Manufacturing Practice, in the basic material in which this firm specializes, and another in Efficiency. The course in Manufacturing Practice was organized in 1913, and consists of two lectures a week for 26 weeks, beginning with the raw materials and their methods of preparation. The power plant and its equipment are then discussed, leading to a detailed discussion of the different processes which are used in manufacturing. The idea of this course is to supplement the experience gained by the "flying squadron" in the shop. The material is presented by those people in the organization who are best equipped by experience and training to treat the subjects.

The course in Efficiency, of one hour per week for 26 weeks, includes the fundamental principles of economics and a discussion of the principles and types of management in present day operation which will lead finally to a study of some of the efficiency methods carried on in this plant which have to do with the routing, planning, setting of standards, and piece processes.

Outlines of these admirable courses have been submitted.

SELECTION OF EMPLOYES

A most significant experiment in evolving scientific methods for the selection of employes is submitted by a prominent Class A firm which we quote in full:

"During last year we started to make a scientific study of

IVE TRAINING

ED		18	19	5
(e) Excursions to Other Plants?	h O Me	How Do You Develop Power of Wise Decision in Entire Executive Staff?	Special Methods Used in Developing Genuine Co-operative Spirit Among Executives?	Outlines Sent of Educational Courses?
Yes	Y			Yes
	here k or two uch the Y ther In hing iza- neet	Immediate superior takes up wrong decision with executive and shows him his error, but in spirit of constructive criticism.	Luncheon (daily) of executives. Occasional executive dinners, combining business and social time. Company organ (weekly) enables executives at the different offices to become acquainted with the people with whom they correspond.	
Departmental executives.				
Yes	Regul schools.			
Yes	co- feel- ater	Nothing beyond the gradual delegation of responsibility and authority, and constructive criticisms of decisions made and action taken.	See No. 17.	
	Libra books.	Delegated responsibility, held to account for success of work.	Much welfare work in special recreation rooms. Frequent bulletins. Organization of musical clubs, baseball team, card tournaments, dances, tennis, picnics, mutual insurance, etc.	
Yes	Y			

II EXECUTIVE TRAINING

	16	17	18	19	
t Other oyed in on?	Methods of Selecting Executives?	Results Derived from Interdepartmental Committees?	How Do You Develop Power of Wise Decision in Entire Executive Staff?	Special Methods Used in Developing Genuine Co-operative Spirit Among Executives?	ED — Ex tc I
eplies.	Executive should be well acquainted with the electrical industry in general, which necessitates considerable experience in this particular line of work. Some of the essentials in this firm are: (1) Technical training, (2) Business training, (3) Good judgment in general matters, (4) Ability to make decisions promptly, (5) Ability to see that decisions and orders promulgated are carried out with despatch and least friction, (6) Diplomatic handling of employees, (7) Coöperation. By constant contact with employes can readily determine in a period of time whether they have above.	Good	General line of such a nature as to require many decisions daily by department heads. By carefully observing and criticizing their work daily, find have been able to develop power of wise decisions.	No particular special methods. Think that if plan outlined under No. 16 is carefully followed and wise selection made from the force to fill executive positions that coöperative spirit wil be fully taken care of.	
	Merit System	Do not use:	No special method other than daily contact with General Manager.	Same as No. 18.	
	Do no specific work along this line.				
ay an ad- machine. , say, 100 k against ne adjust- of errors ng among, rs. This orth what ments are st errors. teach the are of the nost com-	According to Bonus System. All leaders are put on hourly rate considered remuneration for their lowest physical and mental capacity. Increase or decrease in cost, lates and outs in Dept. Scrap or Re-work, Executive, Mechanical and Clerical ability, discipline, personality, cleanliness and orderliness, promises, arrangement, etc.		Thorough knowledge of the Company's policy. Men sufficiently expert to educate properly the employes. Aim to consider the human element as the greatest possibility for all investigations. All members of executive staff compelled to go through every dept. (32 in all) and study actual conditions as to the co-relation of their duties with the other executives.	Foremen's Club, wherei each month a different fore man is selected as chairma for its monthly meeting. Company first; personal ties not allowed. Bonus o combined gain in reductio of cost plus quality of a depts. Thorough freedo as to the foreman managin his dept., fixing his own em ployes' rate, hiring throug employment bureau. Manager respects ever man and shows it in dealin with the executive. Wo is thoroughly defined each.	

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VE TRAINING

ED (e) Excursions to Other Plants?	O M	n	18 How Do You Develop Power of Wise Decision in Entire Executive Staff?	19 Special Methods Used in Developing Genuine Co-operative Spirit Among Executives?
Yes		here k or two uch the ther In hing iza- nect	Immediate superior takes up wrong decision with executive and shows him his error, but in spirit of constructive criticism.	Luncheon (daily) of executives. Occasional executive dinners, combining business and social time. Company organ (weekly) enables executives at the different offices to become acquainted with the people with whom they correspond.
		co- eel- ater	Nothing beyond the gradual delegation of responsibility and authority, and constructive criticisms of decisions made and action taken.	See No. 17.
Yes	Outsi e r s; reading		Delegated responsibility, held to account for success of work.	Much welfare work in special recreation rooms. Frequent bulletins. Organization of musical clubs, baseball team, card tournaments, dances, tennis, picnics, mutual insurance, etc.

5 Outlines Sent of Educational Courses?	11 ot, Wh as Emp Promot
Referred to An- r No. 24 [not in list].	
Yes	
Yes	
Yes	nmend and pe qualifi
Yes	otions ie abili ailable ll the p ine ha on.

II EXECUTIVE TRAINING

16 Methods of Selecting Executives?	17 Results Derived from Interdepartmental Committees?	18 How Do You Develop Power of Wise Decision in Entire Executive Staff?	19 Special Methods Used in Developing Genuine Co-operative Spirit Amorg Executives?
From rank and file, past efforts, and results of employee. Take into consideration health, ability, reliability, home environment, initiative.	Good	Meetings of dept. heads. Conventions: addresses by men of calibre. Good literature: give and receive suggestions.	See No. 18.
Dept. heads selected by the general supt. All foremen and minor executives selected by the dept. heads, sometimes in consultation with the general supt.	Good in matters of common interest to the different depts. and in special investigations.	Each supt. and each foreman is responsible for the work of his division. He is allowed wide latitude in his choice of methods and in the selection of his men, and is held accountable for results only.	A weekly luncheon, which is followed by a business meeting, does much to promote coöperation among supts. A distinct division of responsibility prevents misunderstanding The selection of the executive staff accounts for much.
From their ability shown in other positions.	Have no such system.	Give them responsibility and consult with them.	Try to develop a feeling of pride in their depts., and make them competitive as far as possible; competitive especially with other plants.
Selection made from own plant. This knowledge is an incentive to work and prepare for promotion.	Good	Executive ability is a result of training and experience and will be developed in proportion to the responsibility placed.	By practising the spirit of equality socially and otherwise, creating the spirit that every man is one integral factor in promoting the best interests of the Company.
Selected from among those having the greatest talent for the position to be filled, especially taking into consideration the person's ability to deal with men and secure their coöperation.	Have none	By giving leading men responsibility.	Weekly meetings. Daily luncheons. Special committee throughout the works to thresh out operating problems. General system of coöperative safety and welfare work. Banquets.

IVE TRAINING

'ED

(e) Excursions to Other Plants?		n C M	18 How Do You Develop Power of Wise Decision in Entire Executive Staff?	13 Special Methods Used in Developing Genuine Co-operative Spirit Among Executives?
		har- akes tely	Train own men from the beginning and require the highest efficiency at all times. The men have a great deal of freedom, but are held accountable to the smallest detail.	Character of the work makes coöperation absolutely necessary. Executives meet at luncheon to discuss shop problems. Prizes, bonuses and royalties are given to develop the coöperative spirit.
Yes				
			None	None
				Regular weekly meetings of dept. heads. Share of net profits divided among dept. heads and office force. Annual dinners and social evenings. Factory lunch room. Semi-monthly shop paper issued.
	See	Have afety Com- oth- ative ork- nter- d it The nces nter nter- ttee, l.		Under the principles of scientific management all the higher executives have part of their pay made dependent on the net profits of the concern. Matters of policy are discussed and argued about quite informally; the higher executives are all good friends socially.
			Advice Limited responsibility	No special methods. They all have it by the time they get to be executives, or they are not made executives.

5 Outlines Sent of Educational Courses?	
Yes	

II EXECUTIVE TRAINING

	16	17	18	19	
at Other ployed in ion?	Methods of Selecting Executives?	Results Derived from Interdepartmental Committees?	How Do You Develop Power of Wise Decision in Entire Executive Staff?	Special Methods Used in Developing Genuine Co-operative Spirit Among Executives?	ED (e) Excurs to Otl Plant
lgment sup- ecords.	Have a committee of Division Supts., whose business it is to keep a file and careful watch of all men who have shown promise. This supplements the observation of the various department heads. Almost invariably advance own men.	Good results in increased coöperation and interest. Also it has proved of great educational value.	Mainly through committee work and talks from the factory heads. Give each executive all authority possible. Decidedly not a one-man shop.	Again, have used th committee system for th purpose and feel that largely responsible for success in this direction.	
	Select from among those who show signs of executive talent. Aggressiveness and honesty are chief requirements.	Very good results and find them very effective in ironing out misunderstandings among depts.	By continually watching and checking on the results of his work, are able to come to a conclusion in regard to the wisdom of his decisions. Whenever he fails, he is criticized.	The departmental committee systems, together with an understanding that suggestions and criticisms in regard to each other's work are welcomed, have done a great deal to create the coöperative spirit among executives. In fact, firm insists upon such coöperation.	N
		If this means consultations of heads of depts., have had good results. Every morning mfg. heads meet to compare results and to approve the product produced the day before. This business differs from mfg. of machinery, etc., requiring little skilled labor. Therefore depend upon foremen and their coöperation to secure quality as well as quantity.	By frequent discussions try to lead men to see the need of executive ability as developed in others.	A personal suggestion. Encouragement to read best magazines and books on business methods.	
	From proven ability.	Have none.	Left to the individual.	Weekly conferences.	
tional work n instructor ose duty is: n of new on of old w styles; n of errors.	Selected from own employes as far as possible. Means used: continuous observation of employe in present position, in order to judge of ability to fill higher position. If no one in present employ seems suitable, firm advertises.	Have never been tried.	By means of executive meetings and personal talks.	Occasional social meetings.	
	None other than selecting assistants carefully with a view to their subsequent promotion.	Do not use.	Delegate all firm can, and give men power to make decisions within a definite policy.	No special methods, but the spirit is splendid.	
rd of em-		None	Must have some of the initial qualifications to start with. Developed by reading, study, observation of some official who is particularly successful.	None	

VE TRAINING

ED (e) Excursions to Other Plants?	O M		18 How Do You Develop Power of Wise Decision in Entire Executive Staff?	19 Special Methods Used in Developing Genuine Co-operative Spirit Among Executives?	5 Outlines Sent of Educational Courses?
					Yes
No	1				
			Try and profit by mistakes and not make the same one twice.	Personal courtesy and organization harmony make special methods unnecessary.	
			This comes largely through experience in the service in the depts. through which an employe passes before becoming an executive officer.	Departmental meetings and conferences.	
e methods indicate		ver any hin the ork rd, all re- taff ent her the an ting ong are ture the	This is a matter of personality handed down from the head executive clear through the line. Have had no scientific method of developing this power other than by the example of wise officials who help those under them.	Staff meetings and annual meetings indirectly do so. The Safety First meetings are along this line; in fact, anything that gets the men together. In addition, the Educational Bureau work persistently and earnestly points out the necessity of, and encourages the practice of, coöperative spirit and methods for efficient results.	
Yes		ant- s of tees and ting in- ects	By holding them responsible for results. The executive must have demonstrated his power of wise decision before working up to his present position.	Educational trips. Conference plan. Student plan. Dissemination of statistics showing general results.	

II EXECUTIVE TRAINING

	16	17	18	19	
t Other oyed in on?	Methods of Selecting Executives?	Results Derived from Interdepartmental Committees?	How Do You Develop Power of Wise Decision in Entire Executive Staff?	Special Methods Used in Developing Genuine Co-operative Spirit Among Executives?	ED Ex to P
	Usually selected from among the employes on account of efficiency demonstrated in handling the duties already assigned to them.	Have no standing committees, except for administering the Relief and Benefit Funds. Temporary committees are appointed from time to time for specific purposes, with good results.	Definite placing of responsibility and authority. Free discussion between superiors and subordinates.	No special methods other than numerous conferences and general discussions.	
y apply . through reau and ation at	No special methods.	Promote coöperation	No special method used. Important decisions usually taken up by committee.	Executives meet in committees; by being executives, are broad enough to know the necessity of coöperation.	
on a per- ot of each sed large- nal record ial record	Almost entirely by promotion.	Excellent	First, to keep the mind open and broaden it as much as possible. Second, to keep well in advance of the development of Co.'s particular business.	Through Co.'s employes' association, encourage athletics, amateur theatricals, pay, death compensation, take care of sick; in fact, efforts along this line are very broad.	
efficiency merit sys- d greatly.	Personal knowledge of the individual as to experience, efficiency, character, temperament, etc.	Have none	By allowing a considerable amount of authority and observing its use, and advising when necessary or when requested.	Weekly meetings with frank and free discussions. Where weak points have developed in one shop the matter is discussed for the benefit of all.	
e, quality elligence, ecords in .	Promotion	Disappointment	Train them to a sense of responsibility while in subordinate positions.	Have none and need none.	
nite	Select the employe who shows special aptitude.	Have none	Question doesn't lend itself to ready answer.	Field and Home Office conventions and staff meetings.	
of review- year.		Greatest benefits. Have committees looking after forms and systems working in conjunction with Bureau of Purchases and Supplies. This committee has saved many dollars by elimination of useless forms and by cutting out duplication.		Have luncheon clubs, and conventions are frequently held.	

VE TRAINING

ED			18	19
(e) Excursions to Other Plants?		O M	How Do You Develop Power of Wise Decision in Entire Executive Staff?	Special Methods Used in Developing Genuine Co-operative Spirit Among Executives?
		m- not ed.	More attention is given to care in the selection of executives than to any later development, the idea being to select only those who have already demonstrated the power of wise decisions. If the need for advice or guidance develops it is given individually by the superior of the executive in question	The Co. Club was organized largely for this purpose.
	Class continu ing in r tine.			
		nit-	Have no definite or specialized program along lines of executive training. Should have and are now outlining a course which will be part of the regular school work, covering instructions for Supervisors, Department Heads and Assistants. Are also organizing a "National" Club, and have dinners at irregular intervals for the purpose of developing the coöperative spirit.	
		l.	By encouragement; by excusing an occasional error in judgment; and by congratulation for an instance of extraordinary good judgment.	By meetings of the executives once or twice a month, and by occasional lunches, when certain topics are discussed.
No		rt- m, ncy the di- on. rd m- tia-	Where there is opportunity the proposition should be submitted to the Efficiency Board before decision is made.	Weekly meetings of dept. mgrs. with the President. These have actually developed this spirit.

5
Outlines Sent of Educational Courses?
Yes

II EXECUTIVE TRAINING

Other yed in n?	16 Methods of Selecting Executives?	17 Results Derived from Interdepartmental Committees?	18 How Do You Develop Power of Wise Decision in Entire Executive Staff?	19 Special Methods Used in Developing Genuine Co-operative Spirit Among Executives?
	See No. 10.	Have no such systems.	The employes enrolled in the Educational Dept. are required to do original and independent thinking in the preparation of papers on mining subjects.	None
	Promote the most efficient.	Very good results if the chairman is wisely chosen.	By responsibility, by commendation of skill and a frown for its absence.	By selling capital stock to executives and allowing a committee of executives to determine the worthy.
	From the office force to here [President].			Office meetings
	No special tests, except a general knowledge of the individual's work.	Tried this plan for a period, but the results hardly justified the time.	Every mistake or error is chargeable to someone. Our system of operation shows in daily reports what is wrong in any way, the responsibility is traced, and the individual is shown in each case when and how his judgment was at fault.	Same plan as in No. 18. When delays or errors occur on account of lack of coöperation, the individual responsible is shown his fault. Do not penalise for mistakes, but plan to reward for good work.
			By putting responsibility upon subordinates.	Frequent meetings; discussions.
				In regard to executive training, only thing which Co. has is a foreman's club which meets monthly for discussion of various subjects of mutual interest.

the problem of the selection of employes. Up to this time we had used the so-called trial and error method of selecting employes, although those who were responsible for making employments had through long experience acquired so much skill that the number of those employed who did not make good on trial were relatively small. It was found, however, that such methods as were used by the employment officers were applied more or less unconsciously and that it was not possible for them to transmit their skill to others, or in other words, that they were not able to set down definite rules which could be followed by their understudies. This meant, of course, that their successors would have to travel the same long and expensive road before they could become equally expert.

"We found on investigation that the people who were claiming success in the work of selecting employes to fill definite jobs, were working along one or the other of the following two lines:

"First, there was a certain class made up largely of members of psychological departments of our leading colleges and universities, who maintained that it was perfectly practicable to devise simple psychological tests which might be used in determining an applicant's fitness for a particular kind of work.

"Second, there was another class of persons who held that there is a definite correspondence between a person's external characteristics, such as color, form, structure, texture, etc., and his mental and psychic characteristics, and that a person's fitness for a particular job may be determined by careful observation of such external characteristics as can be noted by careful observation. Both classes claim to have accomplished definite results but are inclined, however, to try to discount each other's methods and conclusions.

"We determined to make a study of both methods of analysis and to try to determine for ourselves whether either system possessed anything of value for us. We accordingly put ourselves in touch with the leading exponents of both systems and for several months have been carrying on experimentation and study along both lines. While we are not yet in a position to give a final decision in the matter, we are inclined to think from results thus far obtained, that there is considerable of value in both systems but that each has definite limitations. To a certain extent the two systems seem to supplement one another, and it may prove desirable eventually to make use of both systems.

"Now, with regard to the actual results obtained from our study, and first with regard to those secured from the use of psychological tests; we have thus far applied these to the selection of but one class of employes; namely, that class which in our business is most numerous. We have succeeded, by a process of elimination, in finding three simple tests which give comparatively high correlations with the work of the employes actually on the job; that is, on the average, the best employes on that particular kind of work did the best in these three tests, and conversely, the most unsatisfactory employes did the poorest on the tests. There were certain noticeable exceptions to this rule, however. For example, one of the employes who made one of the best records on the tests was one of our most unsatisfactory employes, so unsatisfactory in fact that he was shortly after released. A further study of this particular employe indicated that his unsatisfactory work was due in considerable part to poor physical condition, lack of endurance, stamina, etc., and to indifference and lack of concentration and industry. It is evident, therefore, that entire dependence cannot be placed upon such tests in making employments, because it is certainly not possible to determine from them whether an applicant is of good moral character, or is likely to be loyal, honest, industrious, etc., which are all fundamental characteristics required of any employe.

"Referring now to our experience in selecting applicants by observation of their external characteristics; this is a method which requires a great deal of study, experiment and practice in order to qualify one to use it successfully. We do not consider, therefore, that the persons who have been specializing upon this particular method have had sufficient time or practice to indicate what are the full possibilities of the method. The results that we have secured, however, have been sufficiently satisfactory to maintain our interest and to make us hopeful of further success. To be more specific, we had occasion a few weeks ago to employ about forty people. Arrangements were made to have the person who had been studying this method of character analysis participate with the experienced employment officer in the selection of these new employes. The result was that these two persons, working independently and making selection from among more than four hundred applications, made practically the same selections. This is remarkable in view of the comparatively short experience which the person applying the method of analysis from external signs had had in employment work. This seems to indicate very clearly, therefore, that a comparatively short training in this method of analysis is equivalent to long years of practical experience. One of the advantages claimed for this method is that it is possible by observing certain signs and combinations of signs to determine whether a person is likely to be honest, industrious, etc., but we have not been able thus far to verify this contention.

"We do not regard any of these conclusions as by any means final; in fact, we do not feel that we have more than scratched the surface yet, but we shall continue our study of this problem and are hopeful of ultimately reaching a satisfactory solution, so far anyway as our own particular problem of selection is concerned."

TURNOVER TRIALS IN OTHER WORK

Another Class A member gives the following information regarding the efforts of his firm to try out workers until they find the work for which they are best fitted:

"We have done a great deal of experimenting with certain employes to see if we could place a larger percentage of them at tasks which they could do more advantageously and which would engage their entire interest. The results indicate that our endeavor in this direction has been well worth while, and I shall indicate some of the steps followed in placing our employes. . . .

"In probably 95 per cent. of the cases, the selection is left to the employment agent, and the department head will accept without question any employe engaged by the employment department.

"With such discretionary power it is incumbent upon the employment agent to learn what qualities or characteristics are essential for success in each position. Some positions in our factory demand, for instance, that an employee be right-handed;

some demand extremely good eyesight; some demand that an employe be a certain height, or a certain weight; some demand good motorability; some require a knowledge of arithmetic that is not generally acquired by the 67 per cent. of our workers who have had only grammar-school training, etc. So we feel that to start right one must know what the job demands and then seek among our applicants the one who comes nearest to our ideal type.

"The instances where the help of the department head is sought by the employment department are those positions which call for experienced men commanding high wages, i. e., electrotype finishers, wood engravers, pattern-makers, etc. If an applicant for one of these positions is interviewed by the department head in the presence of the employment agent it is more satisfactory, since a department head more familiar with the technique of the job can ask questions of a technical nature regarding an applicant's experience which are helpful in reaching a determination, and which the employment agent may not think of asking.

"The new employe's progress is followed by the employment agent until it is known that he is contented at the job and that he is giving satisfaction to his department head, after which his promotion is almost solely in the hands of his foreman. However, that no employe may be overlooked, it is the duty of the employment agent to go over the wage rates of all employes each month and note any instances where an employe has not recently been advanced. Each case is then discussed with the department head, and some decision reached as to what is to be done for the employe.

"If the employe is not giving satisfaction the employment department is notified and if it be possible or expedient an employe is transferred to another department. We plan to be definitely informed about every new employe's progress within two months, so that too much expense is not incurred by extending the trial period.

"In ten months . . . we had 110 transfers of employes from one department to another. Of these, 35 per cent., however, were transfers on account of work being slack in the original department. The balance of 65 per cent. represented studied effort to place the employe in his natural niche as near as we could find it in our industry.

"While our department heads are empowered to discharge unsatisfactory employes, this is rarely done without first consulting the employment department, and if there are any indications of promising qualities in an employee, even though he is not adapted to the first job, we strive to place him at something else, which often results happily. Employes who are about to leave are always seen by the employment agent before they go, so that the reason for leaving can be ascertained. Any cause of dissatisfaction is noted and carefully investigated, particularly if the same cause is encountered more than once in interviewing employes who are about to leave. . . .

"Our force averages here about 2,300 hands—about 45 per cent. females and 55 per cent. males. In ten months . . . we had only 165 females and 175 males leave us. We laid off, on account of the depression, 140 males and 60 females during the ten months. Probably 25 per cent. of these were subsequently re-engaged. If you are familiar with the turnover in the labor force of the average industrial establishment our figures will be significant to you. About 50 per cent. of our employes have been with us five years or more. . . ."

"EXPENSIVE INSTABILITY"—THE TURNOVER IN BUFFALO

Reverting to the cost of the turnover, we desire to call attention to some recent observations made in Buffalo and described in the article mentioned elsewhere in this report, "Training for Industrial Efficiency."

In one plant, employing less than 500 persons, over three times that number were hired during a year. "The average earnings of these men during these short periods of service was less than $180 apiece. Assuming that it took the time of a high-priced foreman to start a new recruit to do his work, that there was always some danger to the expensive machinery at the hands of the novice, that new records had to be made out, one can readily see that the cost of this instability was easily 10 per cent. of the wages paid out. . . . The general effects of these conditions, which are prevalent in all manufacturing cities, is readily observed in the financial showing of some of the industries. The cost of labor has increased more rapidly than the average rate of wages; while the cost of management, as shown by the percentage of the value of the finished product which is paid to salaried employes, has increased at an unusual rate, as compared with the returns which capital has received. In a certain group of industries the number of wage-earners has increased threefold in ten years, and one would expect to see great economies in manufacturing processes, but instead the cost of labor is found to be 46 per cent. of the value of the finished product, while ten years ago it was only 33 per cent. The cost of supervision and management, as represented by the salaries paid, increased during the same period from 13 per cent. to 16 per cent.; while, after paying wages and salary and raw material, the net return to capital for interest, depreciation, insurance, extensions and reserves was 7 per cent. of the amount invested, instead of 11 per cent. ten years before."

Systems of Promotion—Buffalo

From this same source we learn that systems for promotion are being worked out in Buffalo. Several associations of employers are engaged on standardization of promotion, while instances of individual firms who have developed or are working out systems are given.

V. RECOMMENDATIONS FOR CONSTRUCTIVE WORK

As the foregoing pages indicate, only a very rapid survey of some of the vocational guidance activities a number of American centers have entered upon has been made. The value of the various activities to the Association needs to be intensively inquired into—how far and in what directions these varied guidance activities are the *result* of the community consciousness that local conditions in industry and education are urgently demanding improvement, and how far these vocational guidance experiments are *successful* in bringing about the desired results. Such an inquiry to be of real value to the Association means that a personal investigation should be made of those aspects of the movement which logically promise the best results for the welfare of the Association, as the basis for specific and intelligent constructive recommendation. There is ample material awaiting first hand investigation.

The following recommendations, to which allusions have been made in various parts of the foregoing preliminary report, contain some of the more promising outlooks for further intensive study, and furnish a program for discussion at the convention meeting. The problems suggested for discussion are intended to be tentative and illustrative only, and in no sense as a basis for final conclusions.

Along with the problems offered for discussion are brief suggestive subtopics our rapid survey of the general material resolved itself into. By this means it is hoped to present with the respective problems such observations and constructive suggestions as our studies of various phases of the vocational guidance movement seemed to warrant.

We herewith offer two groups of recommendations for discussion at the convention meeting:

1. Those problems which seem vital to our subject matter and of immediate concern to the members of the Association.

Recommendations in this group hinge largely around the discovery and developing of capacity, and the establishing of permanency in the work force.

2. Those problems which are important but less immediate.

RECOMMENDATIONS: IMMEDIATE

I. *Scientific Methods of Labor Engagement, Promotion and Discharge*

1. Present modes of labor engagement.
2. Analysis of the man.
    a. Kinds of tests: their advantages and limitations.
        (1) Observational.
        (2) Pragmatic.
        (3) Formal psychological tests.
            (a) in business,
            (b) in education, for new recruits and those already employed.
        (4) Phrenological.
        (5) Quack.

- b. What should be known.
  - (1) Physical.
  - (2) Psychical.
  - (3) Mental.
  - (4) Character.
- c. Scientific application blanks.
- d. Proper methods for caring for new employes.

3. Analysis of the job just as necessary as analysis of man.
4. Promotion.
   - a. Present methods of promotion:
     - (1) Seniority.
     - (2) Efficiency tested out.
     - (3) Education the base.
     - (4) Others.
   - b. Scientific bases of promotion.
     - (1) The position ahead should be clearly defined for employe.
     - (2) Trying out—horizontal and vertical lines of promotion.
   - c. Personal efficiency records.
     - (1) The value of continuous records in the development of cumulative efficiency.
5. Discharge.
   - a. Hiring and firing by department heads; newer arrangements.
   - b. Classification of reasons for discharge.
   - c. Careful records of the turnover.
   - d. The frightful cost of the turnover.
6. The place of the employment bureau.
   - a. Recent tendencies toward centralization of employment function; advantages.
   - b. The rise of a new position—that of employment expert or counsellor.
   - c. The work of the bureau.
     - (1) Hiring, promotion, discharge.
     - (2) Educational.
     - (3) Counselling and guiding.
     - (4) Welfare work.
     - (5) Its potentialities.
     - (6) Aid in regularization of output throughout the year.

2. *The Training of Vocational Guidance Counsellors and Employment Managers*

This is a problem for immediate importance both for schools and for industry. An Employment Managers' Association has been quietly operating in New England for some time past and there has been recently organized a similar association in New York City. These associations, in all probability, will spring up in the near future in all large urban centers. This Association could very profitably consider ways and means of co-operating in the establishing of courses in industrial and commercial centers designed to aid vocational counsellors and employment managers. The right kind of co-operation between industry and education machinery would seem to be essential for the wise direction of such a course. A course is to be given next year on Employment Management at the Amos Tuck School of Dartmouth College.

In no way perhaps can the progress of vocational guidance be better measured than by a study of methods used to insure a supply of properly equipped vocational counsellors. The degree of efficiency with which the training of vocational counsellors is done will have a marked influence upon the direction and future progress of the whole guidance movement.

Compared with the demand, the inadequacy of the supply of wise vocational counsellors constitutes the most serious obstacle to the development of the whole movement. The difficulties in the way of the adequate preparation of the expert vocational counsellor are:

a. Scientific grasp of the technique of the vocations.
b. Knowledge of human aptitudes.
c. Lack of ability to impart to others scientific information.

The difficulty of securing these different elements in combination in the same individual is inherent in the whole vocational guidance situation.

The most practicable way to secure the necessary vocational knowledge is to spend a time as actual worker in the vocations, but the serving of a period of apprenticeship in the vocations long enough to acquire the experience and information needed is a difficult thing, and is likely to handicap in the development of the training in other necessary directions, such as for instance in the principles of imparting information, that is, ability to teach.

Teaching ability, on the other hand, is most effectively acquired as a result of actual teaching experience and it requires specific training. The difficulties in the way of satisfactory results in acquiring teaching ability are perhaps as serious as those in acquiring vocational information.

. The ideal vocational counsellor therefore is a product of the future. While formulating plans that will result in ideals in due time for immediate service adjustments must be made to conform to present conditions as they actually are. Hence, the interest for the members of The National Association of Corporation Schools in some significant experiments along these lines under way in different parts of the country.

1. Broadly speaking, there are two sources of supplying vocational guides, or counsellors.

(a) By special study and preparation utilizing those who have had considerable experience in the industries, such as employment managers, certain work supervisors, executives who have shown ability and interest in the human problems of works management and

(b) Persons selected from the outside who by native ability, training, taste, and special preparation have been prepared for the new vocation of counselling. Some of the most promising results so far as present tendencies indicate are the attempts in certain businesses to provide the necessary vocational guides by securing men and women who are actually engaged in the occupations they propose to counsel in.

3. *The Application of Psychological Tests in Business—Industrial Psychology*

1. Need for same.
    a. To measure ability.
        (1) In employing and promoting.
    b. To fix standard time of work operation.
    c. To measure attention, delicacy of touch, sight, etc.
    d. To detect fatigue.
        (1) Reducing nervous wear.
        (2) Scientific balance of work and rest.
        (3) Beginnings made by scientific management. Defects of the Taylor method.

        (4) Need evidenced by number of firms experimenting with psychological tests; newer attitude of the authorities in psychology.
2. Some results of tests by representative firms.
3. Difficulties of accurate testing:
    a. Due to experimental stage of the science; a coming science.
    b. Due to variable human factor under observation.
    c. Some wild claims.

4. *The Permanence of the Labor Force the New Ideal*

1. The waste of the human turnover.
    a. Economically.
        (1) To firm.
        (2) To individual.
        (3) To society.
2. Some of the fundamental causes underlying the turnover.
    a. For employer.
        (1) Open labor market.
        Immigration.
        Mal-distribution of labor centers.
    b. For employe.
        (1) Routine, monotonous work.
        Especially for younger workers.
        (2) Lack of opportunity for versatility or development.
        (3) Lack of opportunity with individual firms.
        Too close specialization.
        (4) Unfavorable work conditions.
        Cf. great turnover in hazardous occupations, like lead poisoning.
3. Some methods for insuring permanent labor force.
    a. Scientific selection of men.
    b. Scientific education and promotion.
    Versatility vs. close specialization.
    c. Diffusion of responsibility down the line.
    d. Adequate recognition and reward for work.
    e. Democratizing work conditions to a larger extent.
    Same code for the man higher up as the man lower down.

5. *Versatility*

A classification of businesses, positions, processes, etc., readily admitting free alternation. Much discontent from many quarters is expressed against narrow specialization. A considerable number of Association members are experimenting with the ideas of versatility. They are giving trials in varied work positions. Rotation has three different purposes: (1) to enable the worker to find his niche, i. e., the work for which he is best fitted, and (2) to brave the under and unemployment problem and stabilize the working force, that is, in dull seasons, and (3) to aid the worker in getting a varied experience, a kind of promotion.

See recommendation of the American Association of Unemployment in their federal plan recommending that adults be transferred to different operations and processes.

One Class A member reports changing around workers when necessitated by their physical condition, resulting in improvement to the workers. Alternation is more profitable *before* than *after* physical breakdown. Some corporations transfer from one department to another if the worker does not make good after probationary trial.

6. *Specific Training for Executives*

Some firms are attempting specialized types of training for executives other than merely technical training. One firm sent in an elaborate system of training for its executives and the plan seems to be working well. An investigation of what has been done and of the possibilities along these lines would be helpful.

1. Classification of executives.
    a. According to hierarchy.
    b. According to departments.
    c. Horizontal and vertical.
    It is almost impossible to talk in the generic term of "executive." Why not have members of The National Association of Corporation Schools begin a classification of their own executive positions? Difficult ultimate question arises: What are the requirements for each position?
    d. The word needs defining from the standpoint of vocational guidance.

- e. To The National Association of Corporation Schools group the word executive at once recalls to each member his own particular kind of executive and the problems connected therewith.
- f. The growing practice of selecting executives from within the organization.
- g. Importance of studying plans for the promotion of executives—
  - (1) through records,
  - (2) through higher officials.

2. Training executives.
   - a. The executive.
     - (1) The rise of the executive.
       - (a) The business perfector as vs. the business pioneer.
       - (b) Duty of leadership laid upon a greater number of people than ever before.
     - (2) Qualities necessary for the executive to possess.
       - (a) Among others:
         - (1') Ability to analyze and standardize work needs.
         - (2') Ability to train those immediately below for the higher position.
         - (3') Ability to know, understand, and esteem human nature.
   - b. Value of the cross-fertilization of ideas.
     - (1) Dangers of staff-consciousness.
     - (2) Interdepartmental committees of executives.
     - (3) Get together of executives, foremen, and promising workers to study some feature of the business.
       - (a) Actual class work in one firm known.
     - (4) Social occasions for bringing groups of men lower down in contact with those higher up—the luncheon, etc.

7. *A Study of Measures Providing for General Education in Personal and Occupational Hygiene*

1. Selection for employment.
2. Protection while in employment.

  - a. Against workers with contagious diseases. Cf. periodical examinations.
  - b. Occupational hazards.
    - Industrial accidents.
    - Inherent disease of work.
  - c. Fatigue—rest periods.
    - Strain, speed, monotony.
- 3. Suggestions for education for life outside of work.
  - a. Recreation.
  - b. Living.

RECOMMENDATIONS: INTERESTING BUT NOT PRESSING

1. *Special Bibliography of Service to The National Association of Corporation School Members*

A careful digest of much material covered by the fields of the report and prepared in the right manner would be of great service to members of the Association. We recommend such a study of the vocational guidance literature.

2. *A Study of Sources of Supply of Employes*

Such a study would mean, (a) in case of juveniles, a knowledge of the schools and the proper co-operative connections therewith, (b) a knowledge of the sources of supply for adult labor, and (c) a study of the movements against extreme specialization.

3. *Best Methods of Co-operation between Business and Vocation Bureaus*

4. *What Commercial Organizations Are Doing in Behalf of Vocational Guidance*

5. *How The National Association of Corporation Schools Can Best Assist Educational and Industrial Surveys*

6. *The Psychological Influences of Different Systems of Remuneration*

VI. BIBLIOGRAPHY*

GENERAL

Apprenticeship and skilled employment association. ***London.*** Trades for London boys and how to enter them. . . . Reissue, with additions. London, Longmans, 1912.

Armstrong Association, Philadelphia. A comparative study of the occupations and wages of the children of working age in the Potter and Durham Schools, Philadelphia. Philadelphia, 1913.

Ayres, Leonard P. Constant and variable occupations and their bearing on the problems of vocational education . . . N. Y., Russell Sage Foundation. [1914.]

——— ——— Psychological tests in vocational guidance . . . N. Y., Russell Sage Foundation, 1913. (Russell Sage Foundation, N. Y. Dept. of child hygiene. Pamphlet E128).

——— ——— The public schools of Springfield, Ill. Educational Section of the Springfield survey. N. Y., Russell Sage Foundation [1914]. (E137.)

Boston, Superintendent of Schools. Vocational counsel. Reprinted from the report of the Superintendent of schools for 1913. Boston, Printing department, 1913.

Bray, Reginald A. Boy labour and apprenticeship. . . . London, Constable, 1911.

Buffalo. *Chamber of Commerce. Bureau of vocational guidance and industrial education.* Profitable wage-earning opportunities in Buffalo. . . . Buffalo. [1913.]

Cabot, Richard C. *What Men Live By.* 1914. Houghton Mifflin.

Part I: Work.

Chapter III: The Joy of Work.

Chapter VII: The Radiations of Work.

Chapter VIII: Work and Loyalty: The Idealization of Work.

Chapter IX: The Rewards of Work.

Cadbury, Edward. *Experiments in Industrial Organization.* 1912. Longmans, Green & Co.

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* The list of references herewith submitted makes no pretense to any thorough canvass of the field of vocational guidance. It is offered as a further aid in connection with the various divisions of the report, and with the hope that it may aid the members of the Association in the working-out of their individual problems.

Chapter I: Selection of Employes.
Chapter II: Education of Employes.
Chapter III: Discipline.

Carpenter, Charles U. *Profit Making in Shop and Factory Management.* 1908. Engineering Magazine.

Chicago School of Civics and Philanthropy. *Dept. of social investigation.* Finding employment for children who leave the grade schools to go to work. . . . Chicago, The Hollister press. 1911.

Cooley, E. G. *Vocational Education in Europe.* (Report to the Chicago Commercial Club, Chicago, 1912. R. R. Donnelley & Sons Co.)

Davenport, H. J. *The Economics of Enterprise.* 1913. Macmillan: Chapter I: Fundamental Conditions, Man and Environment.

Dean, Arthur D. Industrial education considered in its relation to the high school problem. Syracuse, N. Y., Bardeen, 1910. (School bulletin publications.)

——— ——— The worker and the State; a study of education for industrial workers . . . N. Y., The Century Co., 1910.

Devine, Henry C. Choosing a Boy's Career; a practical guide for parents, guardians, schoolmasters . . . 2d ed., rev . . . London, Glaisher, 1914.

Diemer, Hugo. *Factory Organization and Administration.* Engineering Magazine.
Chapter XXII: Employment of Labor and Labor Problems.
Chapter XXV: Principles Underlying Good Management.

Dopp, Katherine E. The place of industries in elementary education. . . . Rev. ed. Chicago, Univ. of Chicago press. 1909.

Downer, Harry E. The Boy and His Job. . . . Davenport, Iowa, The Contemporary Club, 1911.

Duncan, John C. The Principles of Industrial Management. 1911: Appleton & Co.
Part III: Chapter XIV: The Labor Force.

Emerson, H. Efficiency. 1909. Engineering Magazine.
Chapter VIII: The Location and Elimination of Wastes.
Chapter X: Standard Times and Bonus.

Evans, H. A. Cost Keeping and Scientific Management. 1911. McGraw-Hill.

Freeman, Arnold. Boy Life and Labour; the Manufacture of Inefficiency. . . . London, King, 1914.

Gantt, H. L. Work, Wages and Profits. Engineering Magazine.

General Survey Committee. Synopsis of the findings of the vocational education survey of the city of Richmond . . . N. Y., National Society for the Promotion of Industrial Education. [1914.]

Hartford Vocational Guidance Committee. Report . . . Hartford, January, 1914. Hartford, 1914.

Henderson, C. H. Pay-Day. 1911. Houghton Mifflin.
Chapter VII: The Bodily Integrity of the Workers.
Chapter IX: The Mind and Spirit of the Worker.

Hobson, J. A. The Industrial System. 1910. Scribner's Sons.

——— ——— The Science of Wealth. 1911. Henry Holt.
Chapter XIII: Human Values.

——— ——— The Social Problem. 1902. James Pott Co.
Chapter XIII: Over-Specialization in Industrial Life.
Chapter XIV: Over-Specialization in Intellectual Life.

——— ——— Work and Wealth: A Human Valuation. The Macmillan Company. 1914.

Iowa State Teachers' Assoc. Committee on vocational education and vocational guidance. A survey and preliminary report. Des Moines, Dept. of Public Instruction, 1914.

Jones, Edward D. Business Administration. 1914. Engineering Magazine. The Administrator as General.

Keeling, Frederick. The Labour Exchange in Relation to Boy and Girl Labor. . . . London, King, 1910.

Lewis, E. E. Vocational guidance in the high schools. Iowa, The University, 1914. (University extension bulletin No. 6.)

——— ——— Work, Wages and Schooling of 800 Iowa Boys in Relation to the Problems of Vocational Guidance. Iowa City, Ia., 1915. (University extension bulletin No. 9.)

Lord, E. W. Vocational Education, or the Boy and His Job. (Annals of the Amer. Acad. of Pol. & Social Science, 35: March, 1910, suppl.)

Mallock, W. H. A Critical Examination of Socialism. 1907. Harper & Brothers.
Chapter III: Ability and Labor Defined.
Chapter IX: Ability and Individual Motive.

Minneapolis Teachers' Club. A vocational survey of Minneapolis . . . 1913. Minneapolis, 1913.

Missouri State Teachers' Association. Special committee on industrial and vocational education. Report . . . May 8, 1914.

Münsterberg, Hugo. Psychology and Industrial Efficiency. 1913. Houghton Mifflin.
Chapter V: Scientific Vocational Guidance.

The National Association of Corporation Schools. Annual convention. Papers, reports and discussions. . . . 1st, 1913— New York, 1914.

National Conference on Vocational Guidance. 1st, Boston, 1910. "No record was made of the meeting." An account may be found in Manual Training magazine, 12: 94; October, 1910.

National Education Association of the U. S.
Report of the Committee on the place of industries in public education to the National Council of Education, July, 1910. n. p., The Association, 1910.

New South Wales. Royal Commission of Inquiry, 1911. Report of . . . Commission of inquiry into the cause of the decline in the apprenticeship of boys to skilled trades. (Its Report No. III.)

Ontario. Education Dept. Education for industrial purposes; a report, by John Seath, superintendent of education for Ontario. Toronto, Cameron, 1911.

O'Shea, M. V. Education as Adjustment. 1909. Longmans, Green & Co.

Parsons, Frank. Choosing a Vocation. Boston, Houghton, 1909.

Pigou, A. C. Principles and Methods of Industrial Peace. 1905. Macmillan.

——— ——— Wealth and Welfare. 1912. Macmillan.
Chapter IV: Methods of Engagement of Labor.

Puffer, Joseph A. Vocational Guidance; The Teacher as a Counsellor . . . Chicago, Rand, 1913.

Redfield, W. C. The New Industrial Day: A Book for Men Who Employ Men. 1912. Century.

Richards, Charles R. How Shall We Study the Industries for the Purposes of Vocational Education? Peoria, Ill., 1914. pp. 159-168. (Reprint from Vocational education, January, 1914.)

Rochester, N. Y. School Census Board. The child in industry, by Harry C. Taylor . . . Rochester, N. Y., 1913. (Its Census bulletin, No. 3, October 1, 1913.)

Saddler, Michael E. Continuation Schools in England and Elsewhere. Their place in the educational system of an industrial and commercial state. Manchester, Univ. press, 1907. (Publications of the Univ. of Manchester, Educ. ser. No. 1.)

Scott, Walter Dill. Increasing Human Efficiency in Business. 1911. Macmillan.
Chapter XI: Practice plus Theory.

Smith, Harry B. Report on the Industrial Schools of Hamburg and Altona . . . Albany, Univ. of the State of N. Y., 1911. (Education dept. bulletin No. 491.)

Snedden, David. Problems of Educational Readjustment. 1913. Houghton Mifflin.
Chapter IX: Problems in the Psychology of Vocational Education.

Taylor, Joseph S. A Handbook of Vocational Education. N. Y., Macmillan, 1914.

U. S. Bureau of Education. Bulletins.
1913. No. 22. Bibliography of industrial, vocational and trade education.
No. 50. The Fitchburg plan of co-operative industrial education.
1914. No. 4. The School and the Start in Life.
No. 14. Vocational Guidance.

U. S. Bureau of Labor. Bulletins.
No. 147. Wages and Regularity of Employment in the Cloak, Suit and Skirt Industry, with Appendix Showing Plan for Apprenticeship for Cutters and the Education of Workers in the Industry.

——— ——— Vocational Guidance. Wash., Gov't print. off., 1911. (Part of 25th Annual Report of the Commissioner of Labor, 1910.)

Wisconsin University. University Extension Division. Vocational conference papers and vocational preparation, including correspondence study . . . Madison, The Univ., 1913. (Bulletin of the Univ. of Wisconsin, serial No. 592. Gen. ser. 414.)

Woolley, Helen B. T. Facts About the Working Children of Cincinnati, and Their Bearing Upon Educational Problems. . . . Chicago, 1913.

PSYCHOLOGY FOR BUSINESS MEN

Atkinson, W. W. The Psychology of Salesmanship. 1913. Elizabeth Towne Co., Holyoke, Mass.

Blackford, K. M. H., & Newcomb, A. The Job, the Man, the Boss. 1914. Doubleday, Page & Co., Garden City, N. Y.

Collins, J. H. The Art of Handling Men. 1909. Henry Altemus & Co., Philadelphia.

Deland, L. F. Imagination in Business. 1909. Harper Bros., N. Y.

Dresser, H. W. Human Efficiency; A Psychological Study of Modern Problems. 1912. G. P. Putnam's Sons, N. Y.

Forbes-Lindsay, H. A. The Psychology of a Sale. H. A. Forbes-Lindsay, Pacific Mutual Bldg., Los Angeles, Cal.

Gilbreth, Mrs. L. M. The Psychology of Management. 1914. Sturgis & Walton Co., New York.

Hartness, James. The Human Factor in Works Management. 1912. McGraw-Hill Book Co., N. Y.

Hollingworth, H. L. Advertising and Selling. 1913. D. Appleton & Co., N. Y.

Knowlson, T. S. The Business Psychology. 1912. Sheldon University Press, Libertyville, Ill.

Münsterberg, Hugo. Psychology, General and Applied. 1914. D. Appleton & Co., N. Y.

Münsterberg, Hugo. Psychology and Industrial Efficiency. 1913. Houghton Mifflin Co., Boston.

Ruger, H. A. Psychology of Efficiency. 1910. Columbia University, N. Y.

Seashore, C. E. Psychology in Daily Life. 1913. D. Appleton & Co., N. Y.

Scott, W. D. Increasing Human Efficiency in Business. 1914. Macmillan Co., New York.

Scott, W. D. Influencing Men in Business. 1911. Ronald Press Co., New York.

Scott, W. D. The Psychology of Advertising. 1908. Small, Maynard & Co., Boston.

Woolley, Helen T. and Fischer, Charlotte R. Mental and Physical Measurements of Working Children. (Studies from the laboratory of the Vocation Bureau, Cincinnati, Ohio) Psychological Monographs, Dec., 1914. Vol. XVIII, No. 1. Psychological Review Company, Princeton, N. J.

THE CHAIRMAN: I would like to continue the discussion, but before proceeding I will announce that the discussions are to be limited to about five minutes each. I will call first upon Mr. Albert C. Vinal of the American Telephone and Telegraph Company for his discussion of this paper.

MR. ALBERT C. VINAL (Long Lines Department, American Telephone and Telegraph Company): Mr. Chairman, ladies and gentlemen, in order to meet the present day requirements for telephone service, it is necessary for the telephone companies to give their employes careful training. The entire burden of this training falls upon the companies, because it is not possible for the employes to secure it elsewhere. The cost of this training amounts to a very considerable sum each year, for example, operators require from four to eight weeks of special training, during which time they are well paid, before they can safely be permitted to serve the public. The companies, therefore, experience a considerable monetary loss whenever an employe who has been trained at so great an expense, fails to make good on the job. It is this consideration as well as a desire to secure people who are most fully qualified for the work they are to perform and who should, therefore, be the most efficient workers, that has led us to recognize clearly the needs for the most effective and scientific methods for selecting employes that are available. Naturally, many of our officials have, through practical experience, developed a high degree of skill in selecting employes, but our attempts to crystallize this experience so that it might be available for others having less experience and skill in employment work have not been as satisfactory as we would wish, largely because such officials seem to obtain their results by intuitive means rather than by a carefully worked out method of procedure. In order, therefore, to increase the general efficiency of our employment work we undertook about a year ago an extensive study of the whole problem of selection. We have approached this problem from two angles; we have experimented with psychological tests, and have investigated the possibilities of the so-called "observational method of character analysis."

First a word with regard to the results of our experiments with the psychological tests. We attacked this problem by attempting, first, to determine the mental qualities, such as memory, attention, etc., needed for success in a particular kind of work; second, to secure tests which would indicate whether an applicant possessed these qualities in the desired degree. Working along this line, we did not get results.

At this stage of the study, we put ourselves in touch with several men who are taking an advanced position in applying psychological laws to the solution of business problems and we have been guided largely by suggestions received from them in our latter experiments. The line along which we are now working and which has given very hopeful results is, first, to secure a series of tests which will indicate general intelligence and at the same time will not be too susceptible to the influence of variables which it is difficult to control outside of the laboratory; second, to give these tests to a group of experienced employes of varying degrees of ability who are handling the same class of work; third, to compare the rank gained by the different members of the group in each test with their rank order in their daily work, in order to see if there is a close enough correlation in rank orders in the case of any of the tests to indicate if that particular test might be used in selecting employes for this kind of work. The advantage of this method is that it eliminates entirely those steps which proved stumbling blocks in our first series of experiments, it being necessary to have simply a series of reliable tests and a group of employes doing similar work who have been in the service long enough to be accurately ranked according to the ability they display in the work. We have tested a number of different classes of employes in this way, getting in each case a different set of correlations, as would be expected if the theory on which we are working is correct. We are now engaged in further tests on other groups of experienced people for the purpose of checking and verifying our original results. We are using those tests with which satisfactory correlation has been secured in a tentative way in selecting new employes, as opportunity offers. Employes so selected are being carefully followed up in order to determine the efficiency of the selection.

Summing up the matter, we have, then, secured some very definite results which we have every reason to think are going to be extremely valuable.

Now just a very brief word in regard to character analysis by the observational method. Before this method can be successfully used in selecting employes to do a particular kind of work, it is necessary to make an accurate, detailed analysis of the work itself. Such an analysis cannot be made until the principles of the method are thoroughly understood and considerable expertness has been gained in applying them. While we are not yet in a position to report definite results accomplished in a systematic way along this line of approach, we shall continue our study and we see no reason at this time for thinking that our efforts will not ultimately meet with a measure of success. (Applause).

THE CHAIRMAN: The discussion will be continued by Mr. E. M. Hopkins, of The Curtis Publishing Company.

MR. E. M. HOPKINS (The Curtis Publishing Company): Ladies and gentlemen, the general interest which exists on the subject of vocational guidance and vocational training is well illustrated by the attention which is being given here to the carefully compiled report of Professor Metcalf and his committee. Sometimes I think that the greatest danger which exists in this movement is the eager desire on the part of everybody to do something as promptly as possible. There is a danger ever present that the desire of accomplishment may lead into some general movement or badly advised action which may do injury to a work, the foundations of which have been carefully laid and the superstructure of which must be builded slowly.

Now that the attention of the country has begun to be focused on the vocational needs, we must take constant care to distinguish between those few things which we have come to know and the very great multitude of things that we think.

The process by which the problems connected with vocational guidance have come to command such general attention today is in large part the process by which industry has come to recognize its ultimate dependence on the human factor. The industrial revolution centred interest for a long time on inanimate things,—in earlier stages on machinery and power, then later on plant design and schedules. The questions which arose concerning workers were held to be matters at least to postpone, if they could not be ignored.

When, at last, all else had been pretty well standardized. the problem of personnel remained practically unstudied even. Now, however, realization came of the industrial importance of the subject, and the cry went up from business for new methods in education, while those responsible for educational policies replied with the proper demand that industry make intelligent study of its needs and give them definition.

Even now our public school training is being so generally revised as to amount to a revolution in method. It is becoming, as it was bound to become, in every way more democratic, in that it works to meet the needs of the 95 per cent. who will stop school at from fourteen to sixteen rather than for the 5 per cent. who will be able to continue. We may confidently hope that thus the tragedies of unemployment, of misfit workers, and of latent ability in "blind-alley" jobs may be somewhat lightened.

In an association such as this we are, of course, mainly concerned with our own needs. We should note very carefully that needs are being interpreted more broadly than in times past.

If, either in the schools or in our shops, our vocational guidance tends to an exclusive specialization that restricts a worker's opportunity still more rigidly to a given function than heretofore, the movement is not only idle, but it is pernicious. If, however, it aims to give fundamental training that affords specific skill and fits for a widened range of opportunity, it must eventually command the united support of all.

This latter, I believe, is its tendency. Our efforts must be to keep our perspective right, and to recognize that in this, as in other great movements, the final advantage of industry and of society are inextricable.

I am not a believer in predestination to the extent that I am willing to accept a theory that there is only one form of work in which a man can possibly be successful. He may, in fact, have the qualities for overcoming handicaps in some more prosperous field for which he seems to be less adapted. It is for this reason that there is a very sharp distinction in my mind between vocational guidance and vocational training. An individual may be given not only great help but much courage by the guidance which helps him to find out that for which he is fitted. On the other hand, an individual may have his field greatly limited by a system which forces him in early years into a training which denies him all that exists in education outside of the particular field for which he seems to have aptitudes.

The interest of such an organization as ours, of course, must be two-fold: First, that the education and training shall be available for workers of mature years, who can increase their own potentiality in themselves and their own usefulness to their employers by utilizing the advantages of such training as may be offered toward these ends. Second, such evolution or assistance of public education as may bring the individuals, up to the age of entering industry, under guidance much more careful than in the past, to learn the possibilities of individual pupils and to realize these as largely as may be. The former work can be taken up immediately, to the very great advantage of the companies undertaking it. The latter must be gone at carefully, with sufficient data to justify the conclusions which shall be accepted. Meanwhile, it is not for groups such as ours to decry what the public school education has accomplished in the past, for it is only recently that industry has given any data to the authorities of our public school system, on the basis of which they could study possible revisions of the system for the maximum good of the country at large.

Meanwhile, there remains one thing which all industrial concerns can undertake immediately; namely, the correction of systems within their own plans by which individuals are placed indiscriminately in various departments, without any real attempt to place them in work for which they are particularly adapted. Moreover, it should be recognized more widely than it is that the employe really enrolled within the company may have major qualifications for some other position in that company, even if he does not show maximum success where he may be first placed. These views are much more widely accepted now than they were a few years ago, and it only needs general recognition of the fact that study of this kind will show its effect on the balance sheet for the acceptance of such theories to become general. (Applause).

THE CHAIRMAN: We will continue the discussion by listening to Mr. John McLeod of the Carnegie Steel Company.

Mr. John McLeod (Carnegie Steel Company): Mr. Chairman, ladies and gentlemen, I was asked by Dr. Metcalf if I would say a few words in discussion of the report he has made.

I have installed this work with our company and I have been interested in it because I have known for a long time that it was very vital to the success of any corporation that employs labor in large numbers. I have been in sufficiently close touch to have obtained for myself some of the facts, and some of the experiences of our company in the attempt to do things which come under the head of vocational guidance.

Vocational guidance, every one who has spoken has admitted, is guidance from the cradle to the time when one is willing to give up any active part in the school of life and stand still, allowing others to go ahead.

In our experiences in this educational movement, which is a part of the vocational guidance of the people that we have interested ourselves in in our company, we have established three sets of schools: Salesman's school, the Post-Graduate Course, which takes in those who come to us from college, or come to us with a sufficient technical training to warrant our giving them a higher course; and the Apprentice School. The result of the experience we have obtained from our efforts there has taught us one thing: we have in the past been very careless in our selection of employes, and we have also been somewhat careless in taking care of them. This .educational movement has taught us to be very careful in our selection and more careful after the selection to see that we give our employes a better opportunity to help themselves, and, through helping themselves, to help us. Previously men not fitted for the position in which they were placed were discharged because the department head was not interested enough to see if he could not be used elsewhere. This movement has taught us that that is a mistake, because there are so many places in which a man might fail, and so many other places where he might be a pronounced success.

I believe it has also taught us to inculcate in the hearts and minds of our workmen that they are working with their chiefs rather than for them. They are working with their chiefs for the bigger enterprise. If a person stops to think, no real manly man or woman would care to do anything else. The word boss is an old fashioned one which we now use because we have known the word so long. We now use it in an entirely different sense.

I don't know that I have anything further to say except to say to Dr. Metcalf that I believe he has accomplished exactly what he undertook, which is to get together sufficient data, analyze it, and put it in shape so that in the future he may have something to start with that will be a real starting point. Thank you. (Applause).

THE CHAIRMAN: The discussion will be continued by Mr. J. E. Banks of the American Bridge Company.

MR. J. E. BANKS (American Bridge Company): Mr. Chairman, ladies and gentlemen, there are in the lives of most people two times of choice of occupation: one when comparatively young, fourteen or sixteen years of age; the other later on between about eighteen and twenty-four years. Our early education ought to bear this in mind. I do not think that a youth ought to be too early definitely fixed in any certain path, even though that may be at the time the path of its choice.

I want to speak particularly of the Ambridge plant of the American Bridge Company; I happen to be located there and know more about that than our other plants, though my position has been in connection with all of them.

I was speaking to a delegate last evening concerning the grade of men he would select for employment. He said that he would rather take on a boy of fourteen to eighteen years of age with only public school education than a young college graduate. I said, "Why not choose from them all, why not take of every class that offers and try them out?" We at Ambridge have to consider them all, whether we want to or not. We not only have to engage men from all classes of American birth, but there are probably four out of five who apply that are of foreign birth. Some of the latter do not know how to read even in their own languages. Most of them come to us knowing only a few if any words of the English language. The necessity is to make choice from all grades of men, and the endeavor is to develop them without any limit to the possibility of their advancement.

Our educational work started nine years ago. The first one to speak to me of the need of it was my office boy. He was about seventeen years of age, and he wanted to become a draftsman or at least have a chance to try. He did try and he is now what we would call a good draftsman. In sooth he can fairly count himself an engineer, and he has gotten this training entirely within our School of Bridge Engineering. He has not gone to school outside of the institution a day.

We have some men of foreign birth in our Engineering classes. Of such was a Russian-Pole who had spent two years in the Imperial Institute at St. Petersburg. When he came to us I could scarcely understand at all what he asked for. He wanted to learn English. After he had studied English about three months he informed me he wished to take up analytical geometry. I supposed he would have a struggle to get along with it because of lack of knowledge of the language but I allowed him to try. He soon began to know more about analytical geometry than his teacher, and proved to be one of the best students we have ever had. He afterwards taught one of our classes in English.

Now as to vocational guidance at Ambridge. We have a very good chance to try out new things here. Ambridge is about seventeen miles from the City of Pittsburgh. Because it is far from the city it is more difficult to get workmen, but when they do come they are inclined to remain there, since they find the advantages to be good.

At the plant we have a man who is called the Labor Employment Officer. He has had about twenty-six years of experience in the shop with men. All the hiring and the discharging of the workmen is left with this one officer. The foremen must deal through him instead of having it all their own way.

All employes must be present for medical examination. Not every man that fails in this examination is turned down. He may be given a position if his physical defect does not interfere with the requirements of the work.

I asked our employment officer, he is a man of German ancestry and with a good deal of the German spirit of efficiency, whether he had tried or knew anything about the modern psychological and observational tests. He said he had studied the matter some but that having had a long experience he had not done as much with the subject as a more youthful man might. In spite of the books he has studied he "sizes a man up," relying almost altogether on his intuitional feeling as to what sort of a fellow he is. He told me that this was his way of selection.

There are times when a man simply gets tired of his work and feels that he needs some sort of a change,—he wants to be tried in some other place. Our policy is to recognize this want and endeavor to meet it. It may be work that is considerably different, but we give him a chance to try it.

Sometimes a man has weakened in his work and when we find it to be due to outside trouble he is approached by some one who is close to him and the endeavor made to quietly put him on the right way. There was a young man recently set at a certain job in the shop. In the place first put he was a failure, he did not seem to be adapted to the work. One of the men who was friendly with him, met him one night when he was going home from work. The young man got into a conversation with him and told him that he thought he would have to quit. But instead of allowing him to quit we placed him in a new position, with different environment and different work, and he proved a success in his new place.

I feel particularly for the foreign born. Though not foreign born myself, I spent over five years in a foreign country as a foreigner. I have taught foreigners for more than twenty years, for most part in the evening, aside from my regular work, and I have gotten to realize something of the foreign spirit.

I inquired recently of our management as to their treatment of a foreigner in comparison to an English speaking man. They said that they endeavored to hold them with the same broad rules of equality. If a foreigner does not satisfy us and we have to discharge him he cannot get back by changing his name and applying to another foreman. We try him out, learn all about him we can and give him all the chance he ought to have. If he fails all round we all know him and he cannot come back by changing his name.

If a man leaves for any reason, is laid off or leaves of his own desire, he is given a slip of record, of which we hold the stub, stating why he left. If he comes back and applies for a job again, he has this slip, he can show it to us and his application can be passed on at once.

There is another interesting new thing that we have tried at Ambridge. There have been instituted voluntary court trials for Americans or foreigners who have in any way broken the rules. They are given a chance (through an interpreter, if foreign speaking), to state their cases, and they furnish their own witnesses. The trial is before a jury of office men who are unprejudiced. If there is any fine it is turned over into the public relief fund of the town. This manner of settling minor offences has been popular with the men. They feel they have been given a square deal. When a case goes against a man, if it be not too serious a one and if he has previously borne a good reputation, we do not set him adrift. He is given a chance in some other department to reinstate himself in good opinion.

The spirit that is developing at the Ambridge Plant is, I think, excellent. One of the most pleasant things in connection with our work there is that our shop men are our friends. (Applause).

THE CHAIRMAN: The discussion will be continued by Miss Lilian Meyncke.

MISS LILIAN MEYNCKE (Rike-Kumler Company): Mr. Chairman, we certainly are agreed that the Committee on Vocational Guidance deserves much credit for the extensive report it has submitted, but the length of the report is not out of proportion to the magnitude of the subject.

How many people are working away today at a job which is not only unsuited, but oftentimes distasteful to them. The men and women who apply to you and to us for employment come for the most part from homes where no thought has been given to the choosing of their vocation, from environments which would not inspire them with a desire to make the most out of themselves. Each applicant has spent the desired or possible number of years in school and now starts to work with the one thought of earning a livelihood. Whatever position offers the first opportunity or the largest wage with the least preparation is the one sought. The possibility of its being the right kind of work for him is a lottery chance with the biggest figures on the losing side. It is not remarkable then that we hear employers talking about the inefficiency of the workers. Too much ability is misdirected. May I cite to you the instance of a seventeen-year-old boy who applied to us for a job "at any kind of work." He was an intelligent looking boy whose manner bespoke culture. We gladly took him in as stock boy in the supply room. He did his work well, that is, what he was required to do, but on numerous occasions was found in the engine room or the electrician's workshop. Time that should have been used in rearranging stock was spent in drawing; automobile parts, both longitudinal and cross sections, received the most of his attention. After counselling with him we helped him to secure employment with an electrical manufacturing company. He began as errand boy, and last week came over to us, his face radiant with enthusiasm, to tell how he had been advanced to the assembling room. Plain it was to us at that time that he had been wasting his ability in a department store and forming the habit and reputation of a mediocre workman. In the proper field, we have great hopes for his future success.

Should we accept the axiomatic statement that there is a right job for every person, we confront ourselves with the task of developing a means or scheme by which the two may be brought together. The science of vocational guidance involves two factors: the individual and the job. The qualifications of the one and the requirements of the other must be thoroughly understood. The latter is perhaps the easier of the two, for written outlines of the requirements for many positions are accessible. However, these should be up to date, for the demand of many jobs change from year to year, and they should also be the instruction of one who has actually worked at the job outlined. The business men too are glad to give requirements of their respective positions. The one who acts as counsellor should be sure the opportunities in each job warrant one's undertaking it as a life work. For example, there are now too many bookkeepers. I did not say accountants, but bookkeepers. Why? Because calculating and billing machines have taken their places, and some who are preparing for these positions are going to meet with disappointment, for there will not be the work they are wanting. These conditions must be foreseen by one giving counsel.

We naturally look to psychology to provide a means of ascertaining the vocational bent of people, but as yet nothing accurate or reliable has been found. The tests have revealed some facts, but personally I had more confidence in their value before I saw them tried on a class of students of psychology,—I happened to be a member of that class. The most dependable insight into the capabilities must as yet come from about the following sources: Physicians' statements of health of applicants; then investigation of home and parents, in other words, the environment in which an applicant has lived; then the school record, and the previous working record if he or she has worked any; then the physical characteristics of carriage, gait and so forth.

I should place in the schools vocational guidance departments composed of one or more men and one or more women whose duties shall be to observe and study the children from the day they start to school, watch their progress, inclinations, and so forth, their home influence and health. And second, to study the vocation from the business man's viewpoint, getting into the business itself and talking with the experienced worker. And certainly directing the energies of children into right channels from the standpoint of their aptitude and the demands of the industry.

For instance, I would not recommend vocational guidance in Ohio until between the ages of fourteen and sixteen, because of the excellent school and labor laws. A child needs to spend at least the first fourteen years of its life along the lines of general training. After fourteen he may be given an insight into the kinds of industry that there are by visits to actual fields and talks with those who know the demands of each.

It seems to me that the establishment of a vocational guidance department is a medium which will bring the business man and the board of education into co-operation with the best results to themselves and to the child. Then employers can appeal to the counsellors for their immediate help, those who have had general training, and put them into their special line of industry, follow up their development and draw from their own trained men for all higher positions. Such a suggestion has several advantages. It gives employes an opportunity to do well the thing they like best, with the knowledge that their future career can be made what they desire it to be, and to the employer loyal and better service without the losses which accompany the frequent changing of employes.

The National Cash Register Company's representative, Mr. Atkins, explained to us this morning the plan of the co-operative school in Dayton. This work is one step toward vocational guidance. Such training and development lessens the number of floaters. It raises the dignity of labor by causing men to regard their work as a profession, not as a chance means of existence. (Applause).

THE CHAIRMAN: The discussion will be continued by Mr. Edward B. Saunders.

MR. EDWARD B. SAUNDERS (Simonds Manufacturing Company): Mr. President and delegates, the report is more voluminous than luminous as might be expected. Vocational guidance as a special study is just beginning and is hardly defined in purpose and method.

We see in a dim way that boys and girls are to be led into the work for which they have most aptitude and liking. The man and the job are to be brought together. Misfits are to be prevented. There will be no more square pegs in round holes. Every worker is to find his work and take joy in the doing of it. He will make good and be counted a success. The human factor will cease to be a problem in industry. But how is this Utopia to be realized?

With two college professors on a committee of three to investigate the subject we are not surprised to find the headings—"Some Scientific Aspects of Vocational Guidance" and "Survey of Available Helpful Vocational Guidance Data."

The professors have swung the telescope round the horizon. Now let the discussion go right into the schools and shops and deal with the simple facts of the problem.

Four key words sum up the essentials: (1) initiative, (2) interest, (3) opening, (4) reward.

(1) Initiative.—The boy must do most for himself. The report hardly touches the point that the boy or young man must make his own career. The Greek pedagogue led the boy around. Rousseau was always with his Emile. Our schools do too much for the children. Let no vocational guide take away self-reliance and independent judgment.

Too many business executives cannot make a decision. Too many workmen must be told what to do. Too much welfare work surrounds the workman with comforts beyond his earnings. Let us be careful not to undermine the independence of the American working man. Give his hereditary tendencies full scope. Let him hear his own call. He works best when he wants the job.

(2) Interest.—It is another matter to take an interest in what he is doing and encourage him to do better. Here is the province of the vocational guide. He may be the boy's father, the family doctor, the school teacher, the minister, the scout

master, the employer or one of a new profession of vocational guides springing up. But whoever he is he must take the boy or girl as an individual. This whole movement began in a personal way by a Parsons or a Weaver taking an interest in what the boys were going to do when they left school.

A like interest is awakening in all our industries. The successful manager is bridging over the gulf between the office and the shop. He does not leave his men to be guided by foremen and union delegates. He knows his workmen by name and encourages them to come to his office. He changes their work, promotes them, raises their pay, speaks words of appreciation. These personal relations are the best cure for all labor trouble.

One becoming a vocational guide as a profession, either in the schools or in the employment or welfare departments of an industry, will of course avail himself of every help to study men. He will observe the outward signs of character analysis and try the subtle tests of experimental psychology.

But these can never be a substitute for the warm human sympathy and understanding which come from close association with the men themselves. Breaking bread, rubbing elbows, lending a hand, saying the right word at the right time—these are the old virtues that run deeper than our new science.

(3) Opening.—When ambition has been fired and the boy or man has been fitted for his rightful work, the place must be found. In the school the teacher tells his class in faith—"A place is always ready for the man who is ready for that place." In the shop a place opens and the right man is sought to fill it.

Most lines of business are now so well organized that every job is well defined. The work has been standardized and the qualifications of the man to do it are known. The problem is to find the right man when he is wanted.

The time is ripe for industrial surveys such as was made at Richmond and is being undertaken in Minneapolis. When the labor demands of a community are known the schools can direct the supply. The disposition is growing to keep the boys and girls near home. The country school teachers used to tell the boys to go out into the world and make their fortune. Now they are encouraging agricultural science and redeeming the old farm. In Fitchburg our bright young mechanics are entering the Normal School to become teachers in vocational schools. We get them to lose them. But they work with zest as they climb to higher things.

The corporation school has the important work of carefully defining the duties and requirements of each job in the office or factory. Then comes the training of the workman already there to become more efficient, or fitting the new man to take up the work without loss or waste. All the workmen need broadening. Many have never seen their own factory and know nothing of other jobs than their own.

(4) Reward.—As the clever salesman talks price last, so the reward of labor must follow other things. Our teaching is to emphasize opportunities, fitness, knowledge, and skill. The schools are too fond of telling what big salaries their graduates are earning. Boys have looked more to salary than service. It has become difficult to find boys willing to become ordinary workmen so that common jobs have fallen to foreigners.

There is money and willingness in successful business today to reward all employes according to their merits. But just as happiness follows righteousness, pay follows service. My little girl asked "Do you make saws?" I answered, "No, I try to make the men who make the saws."

Vocational guidance leads a man to his work, then makes that work seem the biggest thing in sight.

THE CHAIRMAN: We will now throw the discussion open for those who wish to take part. First, however, I should like to call upon Dr. Mann who was referred to by Dr. Metcalf as one who is especially enthusiastic about engineering education and who is conducting an investigation into that subject under the authority of the Carnegie Institute. We are all highly pleased that Dr. Mann has found it worth his while to attent our Convention, and we would like to have him add something to our discussion.

DR. C. R. MANN (Carnegie Foundation): Mr. Chairman, ladies and gentlemen, I have listened with great interest to the discussions of public education and vocational guidence. I noted the suggestion that this society felt it desirable to investigate these two questions by employing special investigators to go around and study them at first hand. If you are going to do that, I would like to suggest that you employ for your investigator that old darky preacher who got up and said to his congregation:

"Brethren, this morning I's going to define for you the indefinable; I's going to explain to you the inexplicable and I's going to unscrew for you the inscrutable." (Laughter.)

The idea that I think I might contribute to this discussion can be brought out by a statement of my own experience in the study that I am prosecuting in engineering education. A few months ago I knew nothing about engineers or their education, so I tried first to find out what it was that the profession wanted of the engineering schools. This was done in two ways: first, by personal interviews with individual engineers; and second, by a study of the records which some industrial firms keep.

From the first of these methods of investigation I secured a great deal of information of the type that is contained in the answers to your Questionaire; such as, that they wanted broader minded men, men who could write better English, men with more initiative, men with better business sense, and things of that sort; all of which sounds very well, but means very little when you ask the question, "How are the schools going to achieve these particular things?"

The other type of information comes from the records which some of you keep in regard to the efficiency of your employes. In particular I might mention two sets of records which I have been permitted to study, those at the General Electric Company at Schenectady, and those of the Westinghouse Electric and Manufacturing Company at Pittsburgh.

The principal point derived from those records—a point that was quite a shock to me as a schoolman—was that the efficiency of the students who went to those firms from the engineering schools was measured and estimated in terms of initiative, tact, honesty, accuracy, industry, personality and other qualities of this kind. No school man ever thought of rating the students in any such way.

To make the discrepancy perhaps a little more concrete, let me cite a particular instance which illustrates the difference between the schoolman's point of view and the professional man's point of view. The schoolman is interested in having the boy give him in his examination answers to a question like this: "If a stone is dropped from an indefinite height, what will be its velocity at the end of the *t*th second?" (Laughter.)

The professional man is interested, on the other hand, in knowing what is the difference between a live load and a dead load on a crane or bridge. The same principle is involved in both problems, but the schoolman and the business man view it from vastly different points of view. This difference in the point of view was one of the main themes of this morning's discussion, and the question was rightly raised how you are going to make the professional, industrial point of view clear to the schoolman. And there is only one way to do it, and that is for the industrial professional class to define clearly what it means. This can best be done by means of tests which must be sucessfully passed by applicants for positions.

The teaching in schools is ultimately aimed at preparing the student to meet certain tests, which as a rule the teacher makes up to fit his academic ideals. If he is in New York State, the Board of Regents' questions must be the test, and the teacher in the school aims at making the boy proficient in passing those tests. Applied to the engineering school, it is clear that if the engineers will establish as a condition for admission to the profession, certain tests and say to the schools "These indicate what the engineers should be able to do to get into this profession," the schools will at once modify their teaching and bend their efforts to make the boys able to meet those tests.

Thus it appears that the answer to your question this morning, namely, "How are the industrial men going to help the schools to understand what industry wants and needs" is the same as the answer to your question this afternoon, namely, "What sort of tests are we going to use for vocational guidance?" If you will devise and put into practice as a condition of admission to each occupation tests which really test the ability of the applicant for that occupation, the school will rapidly modify its instruction so that the pupils will be able to meet those tests, and you will make progress in vocational guidance.

The same is true of elementary industrial education. If the industrial concerns, or the members of this Association, will define their needs in terms of tests the schools will understand what is wanted, will be able to get your idea, and will be able to alter their teaching to meet those tests. So that the one point that I want to bring out clearly to you is—that definite objective tests which define the type of ability which you wish to have developed are most valuable, not only to you yourselves as employers in selecting your help, but also as your most powerful means of controlling what is done in the school.

The determination of what constitutes suitable tests is a very difficult and a very lengthy problem, but it is not at all impossible of solution, if the facts are recorded and carefully studied. Mr. Vinal has told you of an experiment that they have been trying in the Telephone Company in New York; and there are other firms making experiments of a similar nature, life insurance companies and manufacturers. All who have tried it seriously and with care find that it pays.

The one thing which it is of great importance for those of you who are interested in this matter of tests is carrying out the suggestion that was made to you by Mr. Collyer this morning: He stated that their company was very careful to keep accurate records of the careers of steel rails. This is really important for steel rails, but it is even more important to keep records of the careers and abilities of employes. In the study of engineering schools we have succeeded in getting more specific information from the records that are kept at the General Electric Company and Westinghouse Company than we have from interviews and talks with engineers and from letters which they have sent us. For instance, an analysis of those records shows that certain schools are developing initiative while other schools are weak in that particular. An analysis of the work of the schools then shows why one school is strong in that particular and the other weak; but you can never detect the differences in schools in their development of initiative unless you have well-organized records to study.

Let me then urge you, if you are interested in helping to solve this problem, to make a practice of keeping accurate records which reveal the varying abilities of your employes; and when you have done that, let us have a chance to study those records. I thank you. (Applause.)

THE CHAIRMAN: I wonder, Dr. Mann, if you could have any suggestion that would be admissible as to what the records submitted to you contained.

DR. C. R. MANN: Well, the records from which we have obtained a great deal of information at the General Electric Company and the Westinghouse Company are rather simple. The students there are sent as apprentices, as you know, into some particular department and kept there for several months under observation of the foreman. At the close of his term the student is rated by the foreman on the subjects of technical ability, accuracy, industry, push and personality. He is rated as A, B, C or D, on each of these heads. He then goes to another division of the work and is rated by another foreman in the same way. The records which we have studied are of this nature, that is, they consist for each apprentice of a rating by four different foremen. A longer record is valuable, but you can get an enormous amount of information from these simple ratings. For example, the primary aim of the schools is to develop technical ability. From the study of those records we find that in some of the schools there is a high correlation between technical ability and initiative. In other schools there is a low correlation between technical ability and initiative. With these facts established, it is possible to make an analysis of the school and to discover the reasons for these differences. The result is very interesting: Schools that develop little initiative have a military system of organization. Schools that develop high initiative have a very different organization. You may, perhaps, be interested to know that Pratt Institute develops relatively high initiative in comparison with technical ability. We all know that Pratt Institute has practically no academic entrance requirements, but selects men on the basis of whether they seem to be promising men for technical careers. Their methods of teaching are also very different from those used in the military type of school. This may serve as a hint as to the type of information which you can get from records.

Mr. J. W. Dietz (Western Electric Company): May I ask Dr. Mann whether records are kept after the men finish the course? Are they renewed at definite intervals after the men are permanently employed to show how they have progressed during the one, two or five years after they have taken these courses?

Dr. Mann: That I do not know. Mr. Rohrer is here, and perhaps he will tell you whether they follow the men after they leave the two-year apprenticeship course.

Dr. Eldridge (Simmons College, Boston): I thought you might be interested to hear about the elementary tests which were suggested by the committee of which Mr. Cody is the Secretary.

At a meeting of the National Commercial Teachers' Association in 1913, a committee was selected and instructed to attempt to devise some elementary tests which could be used for examination by employers and by schools. That committee is composed of such people as Governor Ferris of Michigan, Mr. Frank V. Thompson of the Boston School Committee, Mr. Sherwin Cody of Chicago, and others. The report has been published under the title of "National Business Ability Tests" and can be procured from either Mr. Cody or from the United States Bureau of Education at Washington.

The report outlines tests which are entirely elementary and along the following lines: Attention, memory, addition, multiplication, fractions, percentage, spelling, grammar, punctuation, copying addresses, filing, shorthand and typewriting, business papers, and answering letters.

These tests are all simple in their nature and most of them are such that they should be successfully performed by graduates of grammar schools.

The committee has outlined a method of marking and has attempted to formulate what results should be gotten in each of the problems. For illustration, twenty-five examples in addition are given. There is a certain time in which the ordinary pupil with no special training ought to be able to do these examples. That is the basis on which the test is graded.

I have seen these tests tried out in the last two or three months in some institutions of fairly good standing and I am sorry to say that the results have been a rather sad commentary upon the ability of people with fairly advanced training.

THE CHAIRMAN: Are there any others that would like to enter into this discussion?

MR. E. G. ALLEN (Cass Technical High School): I would like to ask, in making up these tests and in laying down the standards for men to work, do you take the students into your confidence? Do they know that there is laid down for them a definite standard to work towards while they are making these tests? Do they have an opportunity to see their record as it is made from time to time?

DR. MANN: That I do not know.

MR. T. H. B. WHIPPLE (Westinghouse Electric and Manufacturing Company): They do in our company.

MR. R. B. HARVEY (Westinghouse Electric and Manufacturing Company): The Westinghouse Electric and Manufacturing Company file the record sheets of their apprentices in a place which is accessible to the apprentice himself, his shop supervisor, and the three members of what is known as our "Educational Committee." The members of this committee represent the three broad fields: Manufacturing, Engineering, and Commercial. This committee encourages the apprentice to continually watch this sheet, which is posted monthly, and which covers about 18 personal characteristics, as well as his class work with any general remarks pertaining to him. We find that this helps us in our work of guiding the men as it encourages self-analysis on the part of the student.

These sheets are carefully watched by the members of the committee and are made the subject of frequent conferences with the students in order to approximate as nearly as possible the line of work to which the man is best adapted. Another good feature of this scheme is the fact that the students realize that preference is given to those making the best record and consequently they leave no stone unturned when it comes to correcting their short-comings. It all narrows down to healthy competition "the best man winning."

MISS L. SHOEMAKER (The Joseph and Feiss Company): So much has been said this afternoon about the scientific selection of new employes and so little about their subsequent training, that it seems fitting now to consider here that phase of employment. For the year 1914 The Clothcraft Shops of The Joseph and Feiss Company employed two hundred and ninety new hands, a turn-over of about twenty-eight per cent. This is inclusive and complete, covering all discharges and quitters, excusable and inexcusable. This, for a garment making industry, we are told, is remarkable. We feel that we have accomplished this result by a comprehensive, unflagging personal interest taken by the management in its employes.

In the first place, a girl is chosen for her general desirability. This we discover by an informal conversation with the applicant at the time of recording her application and later at the time of her employment. This we feel at present is a more satisfactory method than scientific tests. We feel that a girl without experience but showing evidence of good mental characteristics, of fair-mindedness and a willingness to learn, is more capable of development than one better trained in the requirements of the trade and not so desirable as to character.

From the first day of her employment until she reaches a time when she can earn without allowance the standard of the class in which she is placed, a girl is most carefully watched. This covers usually a period of from six to eight weeks. The payroll department working in conjunction with the instruction department keeps an accurate daily record of the girl's progress during that time. If increase in skill with consequent advancement in earning is not so rapid as it should be, the girl's case is analyzed and the cause of her inefficiency discovered. The question may be one of various conditions, health, attitude of mind, home conditions, instruction; in any event the case is referred to the service department or the instruction department for especial study.

In an establishment where the personnel numbers one thousand or less, it is possible for the management to know every girl and boy by name. This stimulates a spirit of easy and friendly intercourse between employer and employe and encourages a desire for mutual co-operation and benefit. The closer the personal contact in a shop can be developed the greater will be the feeling of loyalty for that shop among its employes, and the smaller the turn-over.

MISS LILIAN MEYNCKE: Most of the considerations that have been voiced here have not been for girls, and may I ask if some one has something to say about what may be done in the way of vocational guidance for the young people who are still in school and do not know the demands of business or industry.

MR. L. ATHERTON (Swift & Company, Chicago): I believe I can throw a little light on the question that has been asked. I have been trying to carry on a certain line of work for Swift & Company for the last twenty-three months, a work more particularly with boys under seventeen years of age, and I am glad to be able to tell you that we are getting some co-operation with the high schools and graded schools of that part of Chicago. They begin to understand what we want and we understand something of their problems in preparing these boys.

I happened to have under my supervision a short time ago one hundred and seventy boys under seventeen years of age; one hundred and thirty employed by Swift & Company and forty by

Libby, McNeil & Libby, our neighbors in the Yards. There is in Swift & Company an accurate record of service of all boys employed for eleven years back. For the nine years preceding my coming with them they employed about 1,350 boys and their average length of service was about three and six-tenth months. It is not necessary to tell you business men here that you cannot get very much into or out of a boy in three and one-half months. December 31st last, after the new plan had been in operation sixteen months, our boys in service averaged about eight and one-half months. This is not quite a fair comparison owing to business conditions but something surely is due to the plan followed and the help of the schools.

I have worked with Mr. Cody on a few of these tests and have used them somewhat. We have worked with other extremely simple tests but find that they all are fallible and are likely to fall down at critical points. Two years ago I had definitely in mind the kind of tests to use but I find that since then I have modified them until now I believe I am in a good receptive mood. I want particularly to endorse the sentiments of Mr. Saunders of the Simonds Manufacturing Company. It seems to me now that there is no point of contact that I have found that compares in the same way with that of personal touch with the boy.

In this matter of boys, the most hopeful, helpful and entirely healthy symptom that I have there in Chicago is that the boys come more and more to me and others in the office who seem to take an interest in them and their petty but no less real troubles. Not a day passes but some of these boys—and indeed some way past seventeen years old—come either to myself or some other man in the office with a personal and often very important problem that is bothering them. There is nothing in my mind that surpasses this personal touch in hiring, training and keeping the boys and men.

THE CHAIRMAN: I want to bring out this one point, as I noticed the same reference in Mr. Saunders' speech. There was a time when the profession of medicine was looked upon in the same way as psychology is today. All that was necessary was to get the king's touch to cure all ills. In these days, of course, it is necessary to study medicine, to learn about the circulation of the blood and so forth, and the king's touch is done away with.

Now so far as psychology is concerned, it is in about the same stage of development today as medicine was a century or more ago, and people are as afraid of psychology in business as they were of medicine. Therefore, the "personal touch" as a panacea for psychological ills may be simply a working out of the old "king's touch" doctrine in a new line. Psychology does not necessarily exclude "personal touch," but, rather, its study should draw the attention of the employer to the necessity of a little more personal touch than has been the order of the day in big establishments. The whole modern movement of industrial efficiency is toward a closer relationship between the boss and the bossed and psychology is trying to point out the lines of least resistance. Psychology will reduce "personal touch" methods to a science.

MR. ALBERT C. VINAL (Long Lines Department, American Telephone and Telegraph Company): Mr. Chairman, you have just brought out a point which I had intended to make. It seems to me that Mr. Saunders, and the gentleman who just spoke, have perhaps missed the point of the report. Reference has been made to its scientific aspect and to its failure to give proper emphasis to the human element. I want to say, as a member of the committee, that it was the farthest from our intention to overlook the human element in any way. I am sure that as far as the Chairman is concerned, the human element is the thing that is closest to his heart. This should be evident to anyone who has carefully read the "Foreword" of the report. Perhaps the misunderstanding arises from a misinterpretation of the use of the term "scientific." The study of this subject may certainly be scientific in its approach without in any way underemphasizing the human element of the problem.

I agree with the gentlemen who have spoken that there is no surer way of ascertaining the qualifications of a worker than by trying him out on the job, but what we want to do, if possible, is to have reasonable assurance when he starts on the job that he will succeed. There is one practical aspect to this problem which you may have overlooked. I know of several companies whose reputation as employers has suffered because they did exactly the thing which several gentlemen have commended, *i. e.*, they employed first and selected afterwards, letting out those workers who did not make good. My observation has been that workers very much prefer to go through a pretty rigorous examination, if they are assured of retaining their positions upon successfully passing the examination. As an illustration, I might refer to the entrance requirements at Annapolis or West Point. These are unusually rigorous and yet those students who are successful in satisfying them have very little complaint to make. It is those who are not successful in passing who do the complaining about the rigor of the examinations.

There is still another side to the problem. A public service corporation has to meet certain requirements. For example, the telephone companies take on each spring a large number of persons to be trained as operators for the purpose of giving vacations and at the same time maintaining the service at its usual standard during the vacation period. The companies could not afford to come up to the beginning of the vacation season and find that a large number of the girls who had been employed and trained had not proved qualified for the work. The telephone companies, therefore, must employ methods of selection which can be relied upon to produce satisfactory workers or must employ a considerably larger number of persons than will eventually be required, because of the probability that only a certain proportion of the number taken on will prove satisfactory. The latter method is costly because of the expense of training new employes, and would be unfair to the worker who, although not qualified for the work, would be employed only to be discharged after a few weeks.

MR. E. B. SAUNDERS (Simonds Manufacturing Company): I want to say just a sentence, and that is: I was trying to bring out the things I thought the paper did not sufficiently bring out. Of course, if we can get tests we want them, but I think we have got to experiment scientifically for a good many years before we get final tests. We make a great mistake, if we get a set of tests and try to judge men by those tests in a hard and fast way.

MR. J. W. DIETZ (Western Electric Company): There has come to my attention a recent experiment in vocational guidance in one of our neighborhood grammar schools which bears on the point of giving pupils of the last year in grammar school an insight into what is going on in industry. It is so simple and so workable that I feel a few words regarding it will be of interest. It was simply this:

To invite eight men, representatives of different lines of trade and business carried on in that immediate neighborhood, to come in and spend an hour talking to the class, telling about the essentials for success in their particular trade. A definite outline was furnished by the school and the speakers were instructed to follow that outline so as to cover in a fair way the points of interest. A similar plan was carried on by eight women representing different lines of work. They discussed their lines of work,—dressmakers, telephone operators, stenographers, saleswomen, etc.

It is high time that we did something to answer this point that has been raised as to giving the children some idea of what is going on in industry before they get their working papers, and this certainly furnishes an admirable point of contact between the public schools and industry. One of the immediate results was the visit of the class to our plant to see the actual working conditions. Of course a great deal needs to be done along these outlines, but the foregoing plan appears to be a start in the right direction.

MR. JOHN G. OLMSTEAD (Vocational Director of the Y. M. C. A., Providence, R. I.): I am Vocational Director of the Young Men's Christian Association in a neighboring city. I want to say that every Young Men's Christian Association secretary, whether he is conscious of it or not, is a vocational guide. It naturally follows that some are good and some are bad in this capacity.

In answer to the question asked by the lady delegate I would say that the Young Men's Christian Association and the Young Women's Christian Association are doing a large work along this line. Their secretaries are constantly appealed to by young and old for advice. Many of the Associations arrange for interviews between the young man and business men in order that the youth may learn regarding certain occupations. Some Associations take their boy members on trips to manufacturing plants and have illustrated lectures on various occupations.

There is a tendency at present in the larger cities for the Young Men's Christian Associations to form vocational departments within the organization and to go more thoroughly into this matter of giving vocational analysis and counsel, in furnishing employers more carefully selected employes. It ought to be of mutual benefit to your organization and the Young Men's Christion Association in your city to get together and talk this matter over.

An illustration which I think will be of aid comes to me from my experience with a certain firm in my city which constantly calls upon our vocational department for employes. I have found that the men I recommend to this concern hesitate about accepting a position with it and upon investigation I have found the reason to be the following: This concern is always going outside of its organization for employes, instead of promoting or transferring employes within its own organization. The result is that the boys and young men do not want to work for this firm, although it is one of the largest concerns of the city, and one of the largest of its kind in the country. It is working to the detriment of this company to be always going outside of its own organization to fill its better positions instead of promoting men within its own ranks. I would like to impress this one thing upon you men connected with the large corporations, that you should develop your men. If they do not make good in one position, try them somewhere else. Work out a scheme of promotion within your company. It will develop a spirit of loyalty on the part of your employes and a spirit of desire on the part of other young men to come into your company. You will soon have waiting lists of men seeking employment which will give you a much better selection of employes.

MR. F. W. PUTNAM (Director Co-operative Industrial Courses, Providence, Rhode Island): Mr. Chairman, I want to say a word in reference to the Chamber of Commerce in the neighboring city of Providence. The Chamber of Commerce in that city has recently increased its membership to over two thousand members and has instituted a Junior Chamber of Commerce to which the children of members are eligible.

Every Saturday for the past several months they have been taking the boys and girls on inspection trips to the different shops, stores and manufacturing establishments in the city of Providence so that, in this way, these young people get in touch with the manufacturing conditions of the city and learn something as to the kind of work they may desire to take up in later life. They are planning to do more along this line this coming year and, I feel certain, with good results.

In connection with my work at the Providence Technical

High School I may say that I have, within the past few months, spoken at all of the grammar schools in the city, seventeen in number, talking to the boys about what I call the "White collar job," the "Blind-alley job" and the "Overalls job."

I think I was a little too successful in impressing the boys with the dignity of the "Overalls job," for they all want to go to the Technical High School next year, but I feel that I did plant in the minds of the boys at least the thought that they must begin to think about these things seriously and get some idea of what is required to be successful in the "Overalls job."

What I had to say to these boys might have applied equally well to the girls and I have been asked to repeat these talks next year to the girls. I don't know whether I shall be able to do this or not, but if not some one else will be asked to do it. This, in connection with the industrial reports that are to be worked up by our Co-operative Industrial Bureau, should give the girls a very good idea as to what sort of positions are open to them in the city of Providence.

MR. J. J. GARVEY (Western Electric Company, Chicago): Mr. Chairman, I have worked with boys from seventeen to eighteen years and have failed as yet to find any method, except the tryout method, that will assist me to wisely direct a young man and assist him into his proper vocation.

In my present position I am employing young men from seventeen to eighteen years of age and have no knowledge whatever of their ability when they walk into my office for an interview. I may talk with them for half an hour and then form an erroneous conclusion as to their fitness and natural ability for the line of work I wish to employ them to perform. I believe that most of us can tell after a six months' or a year's trial whether they are in the proper vocation or not. If they are not, then the time they have been in the work is practically wasted because the education they have received will be of no practical value to them, the time of the instructor has produced no practical results for the company and the young men will leave with the idea that they are failures.

It seems to me, Mr. Chairman, that if psychology is to be of practical service it should develop some method of solving this problem which is of vital importance to all of the parties concerned.

The Chairman: Perhaps in closing Dr. Metcalf will touch upon that point.

Dr. Henry C. Metcalf: There is very little, ladies and gentlemen, that I care to say in addition to what I contributed to the Report on Vocational Guidance and what I put before you in the abstract of that report at the opening of this afternoon's session. I want, however, to call attention to one thing, which I think is too important to be passed by without a word of comment, and that is the attitude of those who feel about the report as Mr. Saunders evidently does. Mr. Saunders charges that the report is what might be expected since the names of two gentlemen whose lives are devoted to college work are attached to it, that is, that it is theoretic, abstract, and lacking in the human touch, and, therefore, of little service to the members of this Association. Unfortunately for Mr. Saunders, as well as for the chairman of the Vocational Guidance Committee, Dr. Scott was unable to contribute anything to the report. It is utterly incomprehensible to me, however, how anyone, if he had read nothing but the "Foreword" of our report, could have failed to grasp the marked emphasis which has been given to the human aspect of our problems from beginning to end. The whole report is consciously and definitely shaped around the idea of the conservation of human energy. Personally, however, I am glad that this criticism has come forth. It gives me an opportunity briefly to emphasize the fact that there has been marked unanimity of agreement in the discussion of our report this afternoon. Mr. Saunders has the distinction of being in a class by himself in this adverse criticism of the report. During the past five years I have discussed the Vocational Guidance movement before many groups of people,—college faculties, public school superintendents, principals and teachers, groups of corporation executives, business men's clubs, women's clubs, etc. Never have I encountered so little adverse criticism as in this meeting. This to me is significant, inasmuch as it shows a rapidly increasing consensus of opinion among business men as to the fundamental significance of the vocational guidance movement in industry and in education. Mr. Saunders does not seem to appreciate the fact that the Vocational Guidance Committee was expressly instructed by the Executive Committee to prepare a *scientific* report on vocational guidance. I am thoroughly interested in the scientific aspects of the vocational guidance movement, but as an instrument in the furthering of human welfare, I am just as interested in its concrete applications. Your committee knew that the members of this Association would be chiefly interested in the concrete and practical. We, therefore, deliberately omitted much that I would gladly have included in the report. An analysis of the generality and versatility of human capacities is a most interesting, and I believe, important problem for the business administrator, and of great importance to the members of this Association in the problems they have to encounter in their daily duties. The many complex problems in connection with the vocational guidance of youth; the significance of the parent and the home in guidance problems; the far reaching importance of the teacher as guide in the wise selection of vocational choices; the increasing influence of the biologically trained doctor on the physical side of life; the many and grave responsibilities of the business administrator as guide; the far reaching possibilities for good of the expert psychologist as guide; and above all, perhaps, the definite importance of the scientifically trained vocational counselor as guide, since his chief function is the guidance of all the other guides—any one of these and many other interesting and important aspects of the guidance problem, might well have occupied a full chapter in our report. All this, however, has been omitted. The charge that the Vocational Guidance Report is too voluminous and lacks the human touch will, I think, not be accepted by anyone who has carefully reflected upon the far reaching possibilities of the vocational guidance movement. The report is shot through and through with the idea of the conservation of human energy in industry. This it is that has given the report its chief significance for the members of this Association. In behalf of the committee, I wish to thank all those who have so generously contributed to the original preparation of the report, as well as to those who have taken part in the discussion of the report this afternoon. The manner in which the report has been received has been to me a great encouragement. I am looking forward to an interesting and profitable round-table discussion of the report this evening. I thank you. (Applause).

THE CHAIRMAN: It is now necessary for us to adjourn that we may start on the trip of inspection of the Norton Companies' plant. I declare the meeting adjourned.

ROUND TABLE DISCUSSION

VOCATIONAL GUIDANCE

WEDNESDAY EVENING, JUNE 9, 1915

THE CHAIRMAN: Ladies and gentlemen, it seemed to me the afternoon meeting on the subject of Vocational Guidance was an exceedingly interesting one; I have no doubt but that the same interest will continue and, I hope, increase.

Since the names of those who take part in the Round Table discussions will not appear in the Proceedings of the Convention we may have here a real heart to heart talk and confession. There are two features in this. I suppose one is to give forth your experiences and the other is to ask questions, assuming that some one in the audience will be able to answer. Any suggestions should be brought to the attention of the delegates here. In addition to that, let us not be afraid to project ourselves. If you have some idealism, imagination or some thought that you would like to have a little light on or something of that kind, do not be afraid to express it, that is one of the inspirational sides of these talks.

Ladies and gentlemen, let us not waste any time. The meeting is in your hands.

A DELEGATE: Mr. Chairman, I would like to report, in response to an inquiry at the afternoon session, what our experience has done for some school pupils who have not yet entered industry. This has relation mostly to the vacation period. A good many of the regular workers are away at that time, and we have literally hundreds coming into the employment office looking for summer work. They are people who have had little experience in industry. A great many of them are from the colleges and schools who desire work for the summer only since they expect to return to these institutions in the fall.

We have made it a practice to employ from seventy-five to one hundred young persons every summer. We hardly ever take them under fifteen, and at the age of fifteen and sixteen most of these young persons are in the ninth grade of school and the second and third years of High School. They work for two and one-half months, usually, that being the school vacation. And we find that even a month of that experience is a little wholesome for us. Young persons in the high school, particularly boys in the second and third year, develop notions with respect to their future work. I think a factory position loses, in the sense of social estimate. They regard it as somewhat beneath their dignity if they are forced to leave school in the first and second year of high school. In our opinion they are not sufficiently skilled to hold down an office position, but from their own standards in many cases they are just a little over-educated to hold down a factory job, that is, to take a job in the factory with the attitude which will make that job congenial to them. The brief experience of these young persons from school has removed their notions with reference to the factory work to a very large measure. We find, a year or two years later, that even college graduates and high school graduates come seeking positions, frequently asking for them in the office, but if they are not available they will, for the time being, seek a factory job. We have had them come into our factory, and make very good operators, and later on when offered opportunities to go into office work they have declined since they were perfectly satisfied.

I think that might be worked out in small town communities where the factories might work more closely with the schools than is possible in the city districts.

A Delegate: Right in line with what the previous speaker has said, I would like to call attention to what has been done on a limited scale by some companies, particularly by our company, in co-operation with the New York City high schools. Following some similar plans that were worked out in Toledo, a member of the Julia Richmond High School thought he would introduce that system into New York. He wrote the various concerns suggesting this plan, and this is a memorandum that I have in my hand, a memorandum of a plan of co-operation between our company and the Julia Richmond High School. He suggested that the company take two girls, four seniors, and give them employment during the time that they attended school.

Now here is the plan of work for these so-called co-operative students under that co-operative plan, that is, the company co-operating with the high school. The work of the co-operative school was to be done in the statistical bureau of our company, the hours of work were from nine to four-thirty, with an hour for lunch. The students were to work in the office on alternate weeks and to attend school on alternate weeks. In this regard the experiment was somewhat different from other experiments in that we did not accept the girls for half day work, but they worked a straight solid week. The students were to be paid at the rate of $8 a week, during the time that they worked. The work was to continue for six weeks or longer; that is, each co-operative student was to have three or four weeks of office experience. The work of the student was to follow the reports and the line of the specific work of the bureau that happened to be engaged in a survey of the unemployment in various cities. As you know, the custom is that our agents visit the homes of some ten million policy holders every week, so our organization lends itself very well to such a survey. The facts as to unemployment were reported by the agents provided for the purpose. These slips had to be searched, researched, developed and put through all the various stages of statistical laboratory treatment. The girls were put to work on that.

In the beginning we planned to employ only two pairs of girls, two girls working one week and going to school the following week and then being replaced by another set of girls. We found the experiment so successful, that we applied for two more pairs, so in all we employed eight girls in our bureau.

Now these girls were with us not more than four weeks, but it seems that when they returned back to high school they were asked to write compositions on their impressions. I have here an abstract of what one girl wrote. I have checked off a few things that I thought would be particularly interesting to this audience. I will read you the selections.

First, this thought: So many steps must be taken before the statistical problem is actually solved.

"Educating us to have a knowledge of business possibilities." All of them said that.

"Educating us to a wider knowledge of the different trades and industries." This happened to be incident to the fact that they handled so many employment slips, classified the occupation or industry.

"We became acquainted with business people. It taught us to read almost illegible handwriting. It made us plan and adopt sure methods. It made us rely on our judgments in many cases. It made us more accurate and rapid in calculation. From the mistakes on the cards returned by the agents, we have learned how essential it is to read and follow instructions carefully."

Another girl said: "The high schools have done much to familiarize their students with the methods of modern offices as we learned from our own business practice course." They have a business practice course in their high school.

This is what I thought you might be interested in: "It served to teach us the characteristics and eccentricities of individual employers." It seems that the girls thought the employers must have eccentricities.

However, the girls came in contact with the secretary and with the directors of the Bureau, and they came in touch with three or four office men.

Another girl brought out the interesting point that it taught them to take their orders and understand their orders at first, when they are first given. That is, while in school, they were accustomed to have the teacher repeat the order and explain it over and over again; in the office they found that time was too valuable for that, and so they learned to have sharp ears and to try to understand the order when first given.

Now I have also this statement from the teacher in charge of the school. He wrote to us, "You will be interested"—you will recall I said that the pupils worked one entire week with us and then went back to school for a week and then came back to us the third week and went back to school the fourth week, and so on. Now here is what the teacher said:

"You will be interested to know that the students, although absent from school alternate weeks, managed to maintain themselves in the classes. This is not so much a reflection on the school work as may at first appear, it is rather an indication that we do not habitually utilize the energies and stimulate the resources that the students possess such as the students have experienced during the all-day work week."

They turned back to work with a stimulus from the office, reinforced also by the fact that they were earning some money, and they brought themselves into the school work with renewed energy, and so easily kept up with their classes.

I thought that this matter might be interesting for you to know, that is this plan, because it opens up a channel which I need not point out. Assuming, for instance, that the fourth year high school pupil, or make it for that matter the entire school, has this experience, once each year while in high school, comes in contact with three or four different sets of people out of the industries where the pupil is really ready to take a position he will feel what responsibility and what business means, what activity means, what judgment means, in short they have a certain amount of practical experience.

A Delegate: I think that there are a great many of our large companies that make a regular practice, not only of taking in college men but college professors. This is an excellent plan. In my company in past years we have taken in quite a number of college men and some professors and when you get the professor himself to come in and engage in the practical work with the men, why; he gets an accurate viewpoint of the actual conditions under which the work is carried on. I taught for a number of years but it was not until I became part of a large organization that I got the practical viewpoint. By getting in contact and seeing what their own boys have to put up with when they come into the organization, what the positions are, by learning to work, not as an individual but as the member of a group, by seeing how things are handled through committees in large organizations, and following the routine that has to be carried out in putting things through, they get that valuable personal contact which is otherwise unknown to them. They also preserve their initiative and all other personal traits and add to them the ability to work in co-operation with others.

We say a good deal about co-operation, and if the college professor can teach a boy that his progress will not depend upon his own individual initiative and ability alone, but upon his ability to meet other people and work to get with them, it will be very valuable to him. A man's progress in organized work depends so much upon that faculty of getting other people to help you accomplish what you want to do, and I think that in college work there is a great tendency to get the college boy to feel that his ultimate progress depends entirely upon his own individual initiative, if I may put it that way, and not so much on group progress. If you can get a professor to enter your organization as many of them do, they soon learn that it is not a one-man problem, but that it is a group problem, that they are only one of many that are working for a common purpose. If you follow out this plan of employing college men and college professors if only for the summer months the problem of vocational guidance will be somewhat simplified, and the company will get a great many good ideas from them. The plan is very good all around and I would like to hear more about it and see it followed more.

A DELEGATE: Is this done with the purpose of helping the college professor in training his students for the proper line of work?

A DELEGATE: I think it comes about through a desire on the part of the college professor to get a better idea of conditions, and a broader experience in industry.

A DELEGATE: Where does the vocational guidance come in on this last part of the discussion?

THE CHAIRMAN: It seems to me we are getting away from our topic.

A DELEGATE: The point I am trying to bring out, and that I am probably slow in doing, is that when the college professor returns to college and the boys come to him for advice regarding certain positions he is in a much better position to guide them and to be of assistance to them in deciding.

A DELEGATE: What is your plan?

A DELEGATE: We co-operate in that line also. We hold positions open for these professors so that when they return to their positions, since they know our requirements, they are better able to direct their own efforts and those of the men who come into the institution.

I have one position in my own department which will be filled the first of July by a professor. I have a special line of work laid out for him which needs to be done, and it will be specially useful for him in his guidance of the young people going through his school.

I also have held open summer office jobs for high school boys so that they may go back there and know a little more about how to pursue the work in the remaining years of school, and how to help those that are in their classes. We have done it for several years. We have the co-operation of the local high school also. We have employed the principal of our high school in our class. He worked several seasons in our plant.

Since he has had that experience in our plant that man is infinitely better fitted to co-operate with the company and with the boys under him, by giving the boys the proper instruction and the proper information at the proper time, and since he has had this particular line of work he is better able to supervise them in doing their work. He is now superintendent of schools in our city.

A DELEGATE: The situation, brought forth by the last two or three gentlemen is a very helpful one indeed. It gives out a suggestion that more of us could follow to advantage.

A DELEGATE: Vocational guidance has been a live topic with us for the past seven years. Seven years is not a very long time to consider a topic as big as vocational guidance.

Is there any one here who can answer this question for me? How can we determine how to help the individual boy or girl find that which he can do best? "Oh, yes," some one answered, "we can do that all right; just find the thing each likes to do."

If we turn to Germany where they have done more of this work than any other country, we have evidence that the people who do best, not only in mechanical and professional lines, thoroughly dislike their work and want to do something else, which they cannot do at all.

I have personal knowledge of one of the best machine operators of New England. He can easily make six to eight dollars a day on his machine, and he has a decided ambition to go out to Oklahoma and raise hogs. His wife knows he would starve to death at that so she keeps him on the machine.

We cannot, then, be guided by the young person's desire. I know also one of the best mechanics, a man who has held two very good positions in New England, and who just recently gave up a position with one of the largest manufacturers in this country. He is admitted to be one of the best master mechanics of the country, but he wants to speculate in Wall Street, even though every dollar he gets he loses. He has no love for his profession, he hates it. He has a great value as a mechanic, but he hates his work. He loves to speculate, and he always goes into the market at the top and sells out at the bottom. He has been doing that for years. I knew him when he had $25,000 and I bet he has not got $1,000 today, although he earns about $8,000 a year.

I think perhaps we have reached the point where we are groping for another science. We find that a person does a thing well because he wants to do it, and then we find in another case, that a person does a thing well because he knows how to do it even though he does not want to do it. These are the two different points that need study.

What is the next step after your boy and girl comes in? That is the important time. Can you have someone there to look at them and feel of their heads? "Ah, here is a banker, here is a banker." You cannot do that. Prove it! Take James Hill, and Ex-Senator Clark. They are both good bankers. Do they look at all alike? Have they any characteristics alike? Go into any bankers' convention and see if you find in the delegates any characteristics unusual or different from those that you would find here in this room or, vice versa. We must disregard that theory because we are going right round in a circle.

We have great vocational guidance committees, we have tons of literature on the subject, but we have no real information.

A man may like to do something today and may not want to do it tomorrow. A man may make a very great success of a certain profession, and he may have a hobby, something that he just loves to do, that does not pay a cent. Personally, I like to dig in the garden, but my garden costs me a great deal more than it would cost me to buy the vegetables in the open market.

I think the report that has been read here today is the most forcible document in existence on the subject. (Applause.) And when you add to that the fact that Dean Schneider, who has given a great deal of thought and study and who is considered very highly by educators and by business men, has contributed his valuable document to this subject, taking this together with what information we have gathered here today and the result of the study of our committee, we have a collection of the best writing there is on the subject.

In spite of all this we must get right down and work backwards until we find some one thing that will stand the test, and then get the causes from that. If we could get the experience here tonight, it would be a very good thing. It seems to me that we do not get quite down to the subject of guiding the girl and the boy into their life's work and we ought to consider that too.

We have studied this question in trying to formulate our plans for the education of the apprentice and also for the education of the boy who is not to be an apprentice. We have made up our minds that the teacher is a very important factor, and we have begun by educating the teacher. We have the teachers of the public schools coming to our plants and other plants to get our viewpoint. These teachers, who are trying to guide the child of the seventh or eighth grade, or the first, second, third or fourth years in high school into a vocation and really do not know what the vocation is themselves, surely cannot be very much of a success at the job, so it is a question of training the teachers. They have taken up the scheme enthusiastically. We believe that this will work out very nicely, and we would like to start this summer, during the vacation, by getting them into certain occupations in the factory, where they will be put on a salary that will pay them to come, of course.

We have found it advantageous to keep records of our work in co-operative lines, we necessarily change them from one factory to another, because their records led us to believe that they were not going to be successful in that particular branch of the industry, and that they might be so at something else. They all want to be tool makers, of course. But I do not believe it possible that every boy is qualified for this work and the records bear me out in this. We keep a very close record of our boys for a year, that we may suggest to them what we think they ought to do.

By this time next year we expect to have an established plan whereby a number of boys, about eight hundred, will come into our factory, two hundred by four separate and distinct routes each year. In order to find a method of bringing them in and guiding them through and placing them where they belong, we are making a survey and have about finished all the various operations. The operations that have educational value have been placed on one side, those without an educational value have been placed on the other side; and the boys will be guided through the operations having special educational value. They will be given a certain course of study; a syllabus like that which is now in effect for our regular apprentices is being arranged for them. This is our way of attempting to solve the vocational guidance question. We hope to be more successful.

A Delegate: Suppose a boy needed to be guided, to whom does he go? He goes either to his clergyman, or his teacher, and in the great majority of cases it is his teacher, whether he is a high school boy or a college boy. There is not anyone, in my opinion, who is in a better position than his teacher to judge for what the boy is fitted, because he sees the manner in which the boy takes hold of a subject and investigates it and how much initiative he has. He sees the way in which the boy systematizes the facts that he finds; what his faculty is for analysis; how accurate he is. He can see whether the boy will make a leader and to what extent he co-operates in the college activities. He will have personal contact with that boy over a period of about four years. The point I have been trying to emphasize in connection with this vocational guidance is if the boy that graduates from this particular institution enter a particular industry, it is desirable for the professor himself to go to work in this industry and in the particular job that the boy will work in and find out the different qualifications of the position and the conditions under which the boy will have to work. After he has had such experience he is better fitted to advise the boy and is able to give him intelligent judgment as to his fitness for the job. That is the reason I mentioned this plan which the big companies are working out.

A very good reason why the vocational guidance proposition is travelling around in a circle is the fundamental desire for change. It seems to me foolish, therefore, to lay down a definite course of study for a boy with a definite position in mind and expect him to stick to it since you are then forgetting this fundamental human trait.

The object of vocational guidance as brought out at this Convention is to make the best use of human talents. That means that the worker has got to be contented with his work to get the best results.

Another point brought out by Dr. Metcalf in his report was that more versatile training was necessary. It seems to me that the first and most important step that must be taken is to convince the manufacturer that he must depart from high specialization to a field of versatile training. If you are unable to convince the manufacturer of the wisdom of this plan you are bucking up against a pretty difficult problem, he will keep a man doing one thing over and over again without change day after day. But how are you to convince a manufacturer that it is wisdom for him to depart from high specialization, which means low operating cost, to a condition where he is bettering conditions for the workmen and making a higher cost of production?

THE CHAIRMAN: Ladies and gentlemen, I have just received a question. If any of you have questions will you please put them on paper and pass them up to me? We will have them read and then endeavor to answer them.

The first question, "What is the difference between vocational guidance and vocational selection?" I am afraid vocational selection may be a stumbling block to some. Vocational or scientific selection is selection, training and application of human talents. One member of the committee wanted the definition to be: Scientific selection and training and placement of human talent, contending that "selection" and "placement" in the meaning here conveyed were the same.

My conception of vocational selection carries it through to the end of the line. You do not know what he will be at ten years, or at ten years later as the result of this. There are many of you here who ten years ago or even less than that did not expect to be where you are now.

I think a training which has something more than formal educational methods in it, which has for its object the introduction of ideas of various useful things in the mind of the youth, things that may be of actual value to him later on in life and that make for versatility, is coming forth rapidly now, and I do not know of any place where such training can be applied unless in conjunction with the old and formal methods of teaching. If vocational work is to enter into the general education which is given in our public schools and be beyond or a part of the formal methods of teaching for our "business men to-be," if we are to mix in this vocational guidance we must have a more and universal acceptation of it. The selection is only one part of it. And we must remember and recognize that human life is far more versatile than guidance, simply. Remember a corporation employment department could not be a vocational guidance bureau for the corporation.

A DELEGATE: Oh, yes, why not? If properly organized that employment bureau, which you might call a vocational guidance bureau could very conveniently co-operate with the schools. I am co-operating with an expert psychologist. Although it may be a new departure, yet the scientific man should be of great help in working out an educational system.

A Delegate: Can we not depend upon what the college professor tells us about the boy and his adaptabilities?

A Delegate: The college professor does not know the boy, he gets in touch with only a small percentage of the people.

A Delegate: Why would not the same thing apply in regard to the young boy of seventeen and younger? How would a teacher be able to tell for what a boy is best fitted? She is in touch with him only a small part of the time. Some one in the corporation rather than his teacher should guide the boy.

A Delegate: How is the corporation going to know the boy?

A Delegate: You can get that information, about eighty per cent. of them, from their school records.

A Delegate: While you are on that subject of definitions, will you define the phrase used on page 66 in the back of the report "horizontal and vertical lines of promotion?" It is unfamiliar to me.

A Delegate: You may regard the horizontal as moving from one industry, where certain processes and certain applications of talents based upon the demands in that industry are necessary, to other similar industries. Vertical promotion is promotion from lower to higher positions, climbing the ladder, so to speak. One of the great difficulties you meet as you get towards the top is that the opportunities narrow down. As you near the top of the ladder the number of the positions is small compared to the number that are seeking them.

I think Dean Schneider has contributed the most definite information we have on the subject of vocational guidance. He did not base his statements on hearsay. I would like to call attention to the way in which he did do it. We have already heard of the co-operative plan followed by the Manhattan Life Insurance Company whereby the students work half time in school and half time in the shop; that is, one week in the school and one week in the shop. This system, as you know, started with Dean Schneider some nine years ago in connection with the engineering school in Cincinnati.

It seems to me that there are many points about that scheme that are just as fundamental to the questions of vocational guidance. One of the reasons why vocational guidance problems come up at all, it seems to me, is that the school world is so totally different than the industrial world into which the student will be thrust. The student gives four years, eight years, or more to school. He lives in an atmosphere of indefiniteness and abstraction; then he blunders into an industry, into a very definite, concrete system of which he has not the remotest ideas, for which he has really little preparation or knowledge of the whys and wherefores of the work before him.

Dean Schneider's scheme puts the boy two weeks in the real job outside and two weeks in school. This is the fundamental principle of the scheme. Not only does that introduce him to the spirit of industry before he leaves school, but it makes real the actualities that the student has been told of by his instructor. For two weeks the instructor teaches the student the theory of his subject and then in the next two weeks the student may see how it works out in real life. Then when these boys return to school from the shops they are able to tell where they have fallen down when they got up against the real live situations. The instructor must then endeavor to help the students by taking their definite problems and straightening them out. Thus he is held right up to snuff all the time, he has to keep his instruction real. He must make it thorough because his students are up against the real things when they are on the outside work. A solution grew out of that great constant and common source of debate—to have the academic situation meet the industrial situation.

If then, that real spirit of "get-together" on the part of the schools and industry were carried out throughout the school life, I believe that this problem of vocational guidance would not exist. And that is where these corporation schools and those of you in the industries who are so interested in the school problem must be of very vital help to the educational authorities. Here is the real problem and the solution will come from just such co-operative effort. I just wanted to point out the origin of Dean Schneider's contribution to show that it was he who formulated the suggestion of getting the two to work together to a common end and I believe that just as soon as this co-operation is established the vocational guidance problem will vanish.

A DELEGATE: Does not Dean Schneider's plan involve a position known as that of co-ordinator?

A DELEGATE: Yes, Dean Schneider has a man in the department of civil engineering, mechanics and so forth whose business it is to go every week to the office or to the shop and visit the boys personally to find out what they are doing, and the next week to meet them in class and discuss the things they were doing. They bring back into the school all sorts of problems, mathematical and physical, everything they come in contact with in the shop, so that the departments are flooded all the time with these real problems about real facts and about real life. It is no longer theoretical and abstract, but it is physical facts that the men have to deal with, both mathematical and otherwise, and they are bound to learn to solve them more quickly because they are real problems of life which they can see and feel and hear and know.

THE CHAIRMAN: I suppose I ought to take these questions as they come in. Here is one that came to me:

What has been accomplished along the line of overcoming the preference of parents for or against certain vocations for their children? I will ask the one who wrote this to speak on it and explain it a little.

A DELEGATE: I wanted to explain perhaps a word as to that as we often know that in the case of fathers in a particular line of business they feel prejudiced very largely against their particular jobs and they want their boys to do something else.

As an example of something that may illustrate: One of our boys had spent four years learning a machinist's trade and we started him there as soon as he was through his apprenticeship. He is very faithful, is well liked in the shop and he is doing good work. He came up to see me the other day and said, "What is the chance of my getting into the foundry and learning the moulder's trade? My father was a moulder. He wanted me to be a machinist but I did not want to be. I wanted to be a moulder. My father is dead. There is nothing to prevent my going into the foundry if there is a chance for me." I told him when there was an opportunity we would be glad to consider him. He is the sort of a boy who would make good in the foundry, since his interest seemed to be there.

That is true I think of many fathers, they have a prejudice against their own calling and they do not desire that their children shall follow in their steps.

Within the last few months I have had several machinists come in to get opportunities for their boys in the foundry, and several founders wanting opportunities for their boys in the machine shop, and this condition is one that is very often unwise.

THE CHAIRMAN: The next question, "A university class of seniors was made up of 235 young mechanical engineers. Only 1 in 25 was fitted to become a mechanical engineer. The 24 did not care about the work and could not grasp the subject. What would you do with them?"

A DELEGATE: Who said they were not fitted for the work?

A DELEGATE: I was one of the teachers of that class. Being a practical man myself and coming in contact with them day by day, I had the chance to talk with them and ask them questions. They did not care a rap about their subject, they wanted to play ball or do anything else. They had plenty of money and wanted to get away from their work.

A DELEGATE: Have they made good since?

A DELEGATE: No.

A DELEGATE: That is practical experience.

A DELEGATE: Speaking of these co-operative schools, for a number of years we have had co-operative students, but we did not have a great deal of success. We found that the foremen of the shops to which they were assigned did not seem to be in sympathy with them, with the result that the boys were unable to get into close touch with the foremen. They worked with the boys the very least they could, they sent them to do anything but what they were there to do. They kept them busy doing things that did not advance their knowledge of their subject.

We were interested in the school teaching proposition and we wanted to do the best we could, so we went around our plant—we have some four thousand men—and asked the foremen if they had any specially bright young boys who wanted to advance. We found a unanimous response from pretty nearly every foreman and we picked eight or ten boys of whom we asked "What do you want to do?" We found one fellow twenty-six years old, for instance, who had been janitor in a school. He was a general workman and he wanted to become an engineer. It is just exactly ten months since that young man was put into the co-operative course on his working time and in his spare time also he worked at it. He has been working very steadily and there is no question but that upon completing the two-year course he will succeed. The outlook for him is very promising indeed.

This proposition of picking out boys is a very interesting one and it has resulted in nearly every instance in their making good. Usually it has meant they have been permitted to select their own trades. I would recommend to the corporations that they pick their men and send them to schools rather than for the schools to send their men to the corporations; the results would be much more satisfactory.

A MEMBER: Our problem is to determine when an applicant for a position has adaptability and capacity to go ahead in office work. How can we tell if with us he has the proper vocation? What scope of inquiry or investigation is made? Most applicants are over twenty and have tried other things. Is there anyone who can shed any light on that?

A DELEGATE: Mr. Chairman, you come right back to Dean Schneider's plan there.

We have three schools in our company. If a man upon examination has been high on the technical lectures, and low on the commercial lectures, we know that that man belongs in the technical department. And if we find a fellow adding up figures continually instead of adding up his commercial problems, we know that he wants to be an accountant. I say this in justification of my statement.

We have developed a system, whereby corporations can get 80 per cent., as I stated, but that is an arbitrary figure, that is only approximately correct. There are very good authorities on the subject who tell us that about as high as forty per cent. of human nature will do one thing as well as another and they will not do anything in particular. So before you get this subject simmered down you find you have to separate it several times. There is a great percentage of humanity who will not do anything very well, they will do one thing about as well as another. You will not be able to change them much. And there is unquestionably a percentage that have never quite found their right places. That, in my judgment, is where the field lies.

A DELEGATE: I want to ask the gentleman who stated that his company sent boys to school, what kind of a school they sent them to. Suppose a boy wants to start a course in engineering, would you take him at his word, and accept his request and send him to college for four years?

A DELEGATE: Some of the boys who are sent to us do not exactly fit into the organization, even after trying several positions. They are boys who come from considerable distances. When they have completed their course and graduated they usually desire to return to a place nearer their own homes. We have found that a man who has been connected with the company for a considerable time, who has not too much academic education, who has gotten used to the company desires to stay with us and make our work his permanent life work. That is the sort of man we want to develop.

We have had a position in view for several years, that of operating engineer. We have tried to pick from our younger boys a man to develop for such a position and we are now sending a man to the school with this in mind. For instance, one of the healthy signs is that he starts to rub up on his arithmetic, algebra and solid geometry. After he has done this and we have given him a couple of terms of this part time work he is sufficiently versed in mathematics to enable him to read the handbook with intelligence and to know how the formula operates and he has as much knowledge on the subject as he will ever have a chance to use in the position of operating engineer. We do not expect to put him into the engineering department and have made no preparation for this.

A DELEGATE: Where does he get this training, the public school or the high school?

A DELEGATE: At the American Institute. That is a school that compares with Pratt Institute of Brooklyn or the Philadelphia school.

A DELEGATE: Would you do the same thing if you needed a chemist?

A DELEGATE: Yes, we have done so, but practically all of our chemists are graduates of the technical school, or the Institute of Technology in Boston.

A DELEGATE: Is that on a co-operating plan, does he study one week and work the next for you and then go back the following week?

A DELEGATE: He studies for one week and works for us during the next. We think from our experience that that is the best way of training them.

A DELEGATE: How many boys have you on that plan?

A DELEGATE: We intend to keep sixteen boys, eight at work and eight in the school. At the present time we only have eight because we only started in September.

A DELEGATE: What are you going to do with the other eight, if, for instance, you only find that you have eight jobs. You are training sixteen boys and have only eight jobs. When they are all finished, what are you going to do with the other eight?

A DELEGATE: During the time of training there are opportunities opening up in the power department. For instance, if there were any variations in our power work, and there are quite apt to be changes and enlargements every little while in that branch, which necessitate the shifting of our power reproduction and some variation of the power problem, we will need to have at least one man in reserve to fill any vacancy that may occur in that way.

A DELEGATE: But so far as guidance and selection is concerned, it originated with the boy. He thinks he wants to be an engineer?

A DELEGATE: That is the idea exactly. We simply put a notice in our magazine and ask any employe who wants to take up extra study to kindly communicate with his foreman. In other words, if he has any bent at all there is his opportunity. We have boys taking everything from jewelry making to photography. It makes no difference, if they want to take the course we send them to school. If the boy pays his own tuition, as a matter of fact he does and he is earning something besides, after he has completed the course he gets his money back.

A DELEGATE: It seems to me that the corporation can have something to say even if it does make a very close connection with the schools. We have done that in the case of our young workers. I realize I am talking mostly to factory people who do not have the department store problem, but there may be some who are interested in that side of it. As you may know, we, in department stores have busy days, Mondays and Saturdays.

It has been possible because of salesmanship courses in the high schools to get the masters to allow the girls in the senior classes to go into the business houses on Saturdays and Mondays as practice work connected with their regular courses in the school.

We have worked it out this way: We have asked the schools to furnish us seventy girls as a reserve for the minor positions in our work, that is for wrapping bundles to handling money. They furnished us with seventy girls, but before these girls could come to work for us, they had to pass the inspection of our employment department, where they were tested on the various requirements of the position. This was thoroughly done as we wanted these girls as a reserve for these positions later on, and we did not want to spend the time training girls who could not be depended upon as reserves for us after they had completed their courses. For the afternoons they came to us we paid their carfares and they were trained under our examiner for a definite kind of work. When they returned to their school their work was talked over, as is done in other co-operative schools. At the end of the year we know exactly what kind of work these girls can do and we have found girls who, we think, will make ideal workers in the store and who have promised to come back to us.

A DELEGATE: May I ask, do the schools take any part in deciding or helping you to decide what these girls shall do while they are with you?

A DELEGATE: They are put into the initial position in our store, which we believe is the very best training we could give them.

A DELEGATE: The school does not say anything about what you shall do with them and thus they share with you the responsibility of saying what they will do in this store or in any of these particular places. I think this educational system is sound because it gives these girls an idea of business. In the store they get a conception of the business as a whole. In the school they are trained in salesmanship and I believe that it is not right to put young girls directly into selling; they should know the business as a whole, and they are located in the store in the place where they get the best and most complete knowledge.

A DELEGATE: Is there any arrangement whereby the school gets a record of what these girls are doing and has a sort of follow-up arrangement so that they can know that these people pass from one part of the business to another at regular intervals?

A DELEGATE: No, not through this year. You see we only have covered a part of the work. We do not use sixty girls on any Saturday. We do not need any more than that, and we are endeavoring to give them from that point of view an idea of the business as a whole throughout a year's training.

A Delegate: I asked the question because the essential part of Schneider's scheme in Cincinnati, it is not generally understood, is that he goes into the shop and masters the work that the boy is going to do and arranges it so that the boy does not stick in any one place, but he goes about in the organization from one place to another. This is all arranged and is called for by the shop syllabus which contains an examination and questions on particular types of work that the boys are on or are about to take up. While he is in the shop he is working out on his own initiative the answers to all those questions and that is a very important part of the scheme.

A Delegate: May I ask for further elucidation as to your statement that these people are tested on the basis of the requirements of the working needs? Will you bring up that aspect of vocational guidance? When is the analysis of the working needs made? Then where do you test people? Is it when they enter the training?

A Delegate: No, they pass the teacher's inspection first of all; then the teachers send them to us, and they pass our employment department. We have the requirements for all of our positions very definitely stated and these people must measure up to the requirements for each position.

A Delegate: Well then it is the teacher, who really tests the boys and girls in the first place?

A Delegate: Yes, and that comes back to the school. If the person is rejected it is put up to the teacher very definitely because he has passed him in the first instance. This has a very wholesome effect upon the schools because they realize that there are these standards to which they must come up. They have not realized it before.

A Delegate: That is a checking up and it causes a decided reaction, so far as the teacher is concerned.

A Delegate: I would like to say briefly, that I believe that corporations having these men can get a high per cent. of them and can hold a very high per cent. of them, by shifting them around and finding the place or the kind of work for which they are naturally fitted.

A Delegate: I wonder if anyone has had the experience of trying to influence friends?

A Delegate: Suppose I put the matter to a vote: How many of us are vocationally what our friends intended us to be?

A Delegate: I see two hands only. How many of you are doing what you thought ten years ago you would be doing?

A Delegate: I see about four hands there.

A Delegate: I don't expect to be doing the same thing ten years hence though.

A Delegate: That is the idea of versatility. I would like to know how many of you are trying out definite methods of versatility?

A Delegate: How many are shifting employes around to see what the effect will be?

A Delegate: All apprentice schemes and schedules are based on that.

A Delegate: Is that quite true? You say the whole apprentice scheme is based on that. Are not some of these fairly narrow with reference to the specifications?

A Delegate: So far as any particular department is concerned, and every apprentice scheme is intended among other things to help the apprentices do their best in order to let them specialize. Every man specializes after passing his trial course in training, and finally settles down on the particular branch of the work that he wants to specialize on, in other words after you have found his special bent, he settles down on that.

A Delegate: That is rather a limited form, it seems to me.

Another Delegate: We had the idea at one time, I think, that lawyers always had to be presidents, or presidents always had to be lawyers. And then the corporation movement came in and we had the idea that we had to develop a president of that company all the way up through the ranks of the concern. And then we discovered that a man could have activities in forty, fifty or more lines of industry and he would make good in all of them. Now do you not see that a man does not have just one talent? I know of a gentleman who is in too many corporations. He is in eighty odd, a very wealthy man. If he did not have so many, some of us would get to see him once in a while.

Take up personal illustrations, take the case of President Wilson, a school teacher. Take Mr. Cortelyou, president of the Consolidated Gas Company. He started as a stenographer. I know of many instances where stenographers have worked out of their positions. Now we must not lose sight of the fact that we must not lose interest. If we do, we will have a huge proposition on our hands. A stenographer is only worth so much money, some, of course, more than others. Some stick at stenography always while others pass on up to positions as secretaries.

Take Mr. Loeb, he came up through all sorts of conditions, and we could go on indefinitely to name people who have come in from almost every line of activity. At the same time, of course, we can look around and see thousands of people who have been in the same positions and have not advanced any, nor changed any, but have kept the same positions that they have had for years preceding. When we come to discuss this question we will find that we must begin to make subdivisions to get hold of our problem. We cannot do it any more than we can successfully graduate a class in a school without doing so. Can you successfully graduate a class from a school? Some may gather the idea in two years and some may never get through.

This is being tried out and we are next year going to work on that plan in the Institute of Technology. There is a class filling up which is to commence study at five o'clock in the morning. The teacher who is to have that class thinks that he is able to determine when they have completed the subject. But let me ask you this: Take a draughtsman who wants to be an architect—who is the person to determine when he is an architect and to pass on that proposition? It is a committee of architects from the architects' organization who pass on his work. Some men can go through the course necessary to become a draughtsman in six months. Others cannot. They may be there three years in the same class before they can acquire enough knowledge to pass. Thus you have to treat with individual cases to get the real, best and only proper results.

I am afraid that in this vocational proposition we have come to the point where we have simply to say, "Take humanity as a whole and see how this will work out." Theoretically it ought to work out a certain way, but it never will as far as I have seen.

A MEMBER: Here is a very interesting question: If methods of selection of employes fall under this heading "Vocational Guidance" may we have some discussion of methods? This question is very vital to our work. What experiences have you had with reference to selecting your help? I think that is the point that is a very vital subject and one we might well go into. What difficulties, in other words, in finding help have you had and what have you done to overcome them? It makes no difference what your help is, what is your method of collecting it?

A DELEGATE: We get them in under the employment plan.

ANOTHER DELEGATE: This forces attention to the problem which we are to consider tomorrow. I think you will all see how important it is. If you are going to be scientific at this time, and there is so much talk about scientific employment work, that is a good point to discuss, but if you want to leave that until tomorrow, I have no objection to doing that. The question is up for discussion if you so desire.

A DELEGATE: With reference to letting employes realize that if they do not make good in one department by simply studying their weakness or strength we will transfer them to other departments—as I understand it—is that up for discussion?

A MEMBER: Yes.

ANOTHER MEMBER: It has been my experience in selecting men for sales work that whatever may be their future, it was fully understood by them and they were very flatly told that if they did not make good as salesmen they would be discharged. We found that we got a very much higher percentage of successful men by selecting men who knew that they had to make good and that there was no other job for them.

A DELEGATE: We have some 3,200 to 3,300 women and 700 or 800 men working in our concern. I will not go into a description of the different departments in selecting employes, but I will take one particular department. We will suppose, for instance, that a young woman has come in to apply for work. She goes first to the Superintendent of the Employment Bureau. We want a high type of worker and we try to get, as far as possible, high school graduates. In the majority of our office force we make it our duty to find about as good people as we possibly can. But in looking over candidates for the position, in a great many instances, the first observational test is applied and the employment man just simply looks at them and firmly lets them go on their way. We will say we will take a dozen people who are applying for a position in the office. Out of that dozen people we will take seven and the rest will be rejected. Then there are seven left. Those seven are sent to school and the school gives them a written examination. the same as any examination, based on the requirements we expect from our office people.

After we get through the examination of the seven we will lose perhaps two of them who fail in our examination. Those two walk out very pleasantly and then there are five left.

These five then we send to the department that requires them. The department heads select from the five. Of course there are very peculiar differences in different heads of departments in selecting help. One man may prefer blondes, another may prefer brunettes. Another man may have read the book written by Dr. Blackford, and may select on that basis. As a general thing, though, the department head knows pretty nearly what he wants. The girls are sent to the different departments and the department head may reject some of them if he thinks best. It is his privilege to reject or accept them. Then after they have been accepted, they go into the school and we teach them with reference to their work. Usually we have them a day and a half in the school before they go anywhere. They are given a course of instruction so that they may know what their duties are to be. Of course the purpose of the school is to train them in the work and also get them accustomed to the office work.

In our company, as in a great many others, it used to be that quite a number leave during the first week, or the first two weeks. Now since we give them first the advantages of our school, we do not lose any particularly large number.

The matter of vocational selection couples up with the idea of giving the employe a chance to get ahead. As a girl sees some additional work in advance of what she is doing, that she would like to take and if there is a possibility of her doing the better work, she goes to the school and learns that kind of work.

In order to give them a further opportunity for thinking, we have an illustrated lecture course in which the employes see practically all the work that is going on in our house from every department in it. After they get through with that lecture course, they have an opportunity to make a personal investigation trip through the house, and on the way the work is explained to them.

Then they make up their minds as to the kind of work that seems to suit them best and we try to give them an opportunity to work in the positions for which they have fitted themselves. That is vocational selection as it is practiced in our business.

A DELEGATE: Do you have one employment manager for all applicants?

A DELEGATE: We have one employment bureau, headed by one man who has assistants to help him with the work.

A DELEGATE: One bureau?

A DELEGATE: Yes.

A DELEGATE: That is for all departments of the company?

A DELEGATE: Yes, and the transferring of the employe may be through the bureau, or through the help of the school—it usually comes through the school after the girl has started her employment.

In regard to the co-operative work mentioned by a lady here, we have thirty co-operative students with us, that is fifteen pairs. In the selection of them, one of our teachers went out to a particular high school and saw them twice a week for a month or more and by this means we keep in close touch with them. They must go through our school as soon as they enter our employment.

A DELEGATE: Your method then is the personal observation method coupled with your educational plan?

A DELEGATE: Yes.

A DELEGATE: That reminds me of an instance that I know of. A large corporation in New York City that had something like 204 or 208 applicants for salesmen's jobs selected, out of that large number of applications, 25 or 30 and put them on a three-months' trial in their educational course. After that three-months' trial they kept just six.

A DELEGATE: Here is a question: What kind of man should I look for as an employment man in a large manufacturing and construction plant, to look after officers and technical employes and skilled and unskilled labor?

That means I suppose what kind of employment man do you want at the head of your employment bureau? What is the salary?

A DELEGATE: That answer depends upon the man.

THE SAME DELEGATE: The salary depends upon the man?

A Delegate: No, the answer is—it depends upon the man.

A Delegate: You do not answer the question. You replied that "It depends upon the man." There are a lot of corporations, and in fact I heard a gentleman last night say to Dr. Steinmetz: "Now, Doctor, in about one year our institution is going to need the services of a skilled engineer and we can pay $10,000. We want you to be on the look-out for a $10,000 engineer who will accept the position at about $4,000."

A Delegate: I think that is an important question to answer. I knew of a gentleman who recently said to one of his friends that he was in need of a high class man, a $5,000 private secretary. His position demanded a man with talents. His friend after careful consideration with him said, "What do you want to pay?" And the answer was $1,500. What is the answer to that question?

A Delegate: That is one of the most vital of all human nature problems. We have always to meet that problem of wanting to get a high class man at a cheap class price.

A Delegate: How essential is the knowledge of your particular business in that job?

A Delegate: No, not the most essential. But that the man should get on to our ways of doing business is of course essential.

A Member: If I am not monopolizing too much of the time of the meeting, I want to refer to that man who had 200 applicants for a job and took only seven.

Our company is essentially a monopoly. We have to render a high grade of service to the public, or we could not stay in business, nor can any other public service corporation stay in business unless it does render a high grade of service. The public knows what it is entitled to, and is determined to get it; and yet we have no educational requirements. We take people on without making any examination of any kind and we do not lose five per cent, in our sales division. About 500 people are employed there.

What we do do is this: We have a training bureau, and when a person is taken on there they are put in that bureau and are studied by a sympathetic man who knows the boys from A to Z, and if a boy is sent out from that bureau into a department and he does not make good, he is not discharged but his manager can send him back to what the boys call "the observation ward." The fact that they do not like to have to go there often keeps them up to the mark. At one time I had charge of the Bureau, in fact I started it, because we were having too many people leaving the company, and it cost too much to bring a man in and lose him. It is an economical proposition.

We have a star man in our organization today representing the company who, early in his career was sent back to be discharged. The trouble was with the manager who sent him back. He was a grouch; he could not say "good morning" to his help when he came in, and this man could not work under a fellow that could not say "good morning." When this fellow came into the room in the morning his manager grunted at him and this took every bit of life out of the boy. We transferred the boy to another department under another man who could say "good morning" and who, when he found him in difficulty in any way would put his arm around him and say, "Jack, I am your friend." As a result of this treatment the boy has become a star man in our organization. I can give you forty such instances, this is only one.

Remembering and commenting on that statement of the terrible mortality as just related to us, I do not believe that an institution of that sort can stay in business ten years, and I do not believe it will be in business ten years from now if it pursues that policy. Public sentiment will drive it out of business. They are entirely losing sight of the humanitarian side of the proposition. What is going to become of these people who are turned away, if everyone follows that same policy of turning away such a large proportion as that out of the total number of applicants. There are 80,000 people in the State of New York being supported by society now. Do you want to add to it, or do you want society to recognize the fact that all the people can be helped, and that there are very few that can not, about four per cent. we find. Some of them we can help ten per cent., some of them we can help one hundred per cent. Dr. Metcalf knows that. He comes over every year and talks to our boys. They have a real good visit too when he does come.

Let me give you an extreme case of a boy, the son of a good woman, who was about breaking with the company as well as breaking his mother's heart. He lied awfully, and he did many other such stunts. One day I called him in and asked him how much longer he thought he was going to get away with it. He had sent in word one day that his father was dying. His father was working that day. So I sent a letter to his father and told him exactly what his son was doing, and the boy pleaded with me, tears rolled down his cheeks, not to send it to his father. I said, "Now, you have convinced me that I must send this to your father, that is your vital point, that is the only way I can help you." Shortly a letter came back saying, "When I said my father was dying I lied; when I said I was hurt, or my eyes hurt me, I lied; I had gone to the moving picture show, the whole thing was a lie." That was the only way to get at the boy and the only way to get results from him.

Any large company or small company or public service corporation must have the approval of the intelligent public in order to succeed, and you must so carry out your work that the intelligent public will see that it can be done better by the corporation than in any other way if the corporation is going to succeed. I say less than five per cent. is the mortality and we have no special requirements. It can be done.

A MEMBER: I would like to ask Mr. ——— whether he has tried out any of the people who failed in his examination. Whether or not he has kept some of them and tried them out to see how efficient his questions were.

A DELEGATE: Usually not in the same line of work. It very often happens that a person who fails in the written examination that we give is shifted around, and fitted into another place. He is sent back to the superintendent of employment who will find another place for him.

Furthermore, when we find an incompetent employe, we do not discharge that employe right away. The company usually tries her in another kind of work. A girl who fails in clerical work may do very well in our merchandise department; or a girl who fails in the merchandise department may do very well in our office, so our company certainly does give its employes or prospective employes a fair chance. It tries to fix them first in one place and then another, after they have expressed a desire to become part of the organization. We give them at least one chance more after the examination has apparently eliminated them. Throughout the house, all the time, we are making selections. We like to hold on to these people that we take in at six dollars,—that is the minimum wage. We want to improve, always, the station of our own people. We do not like to go outside and get twelve-dollar people, we try to get our six-dollar people to go on up and so we offer them the opportunity in the school to qualify for the higher position and keep on going up.

A DELEGATE: Is not the whole question of vocational guidance the question of better fitting the man for his life work, for the job that he is to do while he is earning his livelihood and to give him a better opportunity to enjoy his work while earning it. I think that we would do well, if we focussed our attention upon a class of men and tried to definitely obtain that class of men.

What class of men would be benefited, if by some miracle, we should discover some definite way of getting children successfully into the good avocations? There are several millions of workers, we can not expect all of us to be executives. These millions of workers should receive some benefit from this selection! To what extent would they be benefited? How would you define to what extent you would have been benefited if vocational selection had been exercised in your case?

I, for instance, know personally a good many big men, as we use the expression, who have become big and have departed entirely from the line for which they have trained themselves. You find physicians at the head of banks, and you find chemists at the head of institutions that do nothing whatsoever and have nothing to do with chemistry.

How often we go backwards in our attempts to advance. As for instance in the case of this man who wanted a $5,000 man but would pay him only $2,500.

At just what class of people may we look and say that it has suffered because it has not had the benefit of good vocational selection? I think that we might with benefit direct our attention toward this point.

A DELEGATE: Let us take this case. Suppose we have a department in which your concern can afford to pay but $2,500 for a man that the job is in reality worth $3,500, but you cannot pay more than the $2,500. What are you going to do about the man? If you have a very good man in your office, and I have a position that suits that man perfectly and pays more money than he is now receiving and I say to you, "I can give your man a position at so much of an advance in salary, don't you want him promoted?" You will say, "Very well, you can have the man." Now, I call that vocational guidance of a high order. But here is the other proposition. What are you going to do about a man for the $3.500 job when you can pay only $2,500?

A Delegate: But the number to whom that principle would apply is very small. I am rather interested in this question, that after all the world's work is being done by the laborers who are in it, the subways have to be dug, the stones have to be broken, and the stenographers have to do their typewriting, that kind of work has to be done. Some make more salaries than others, according to their abilities, and as long as the world's work has got to be done, it has got to be paid for at the current wage. But not every laborer and not every stenographer can work up into something higher. It is a case of the few and not the many. So if we did have a perfect vocational guidance system, just where would it come in? Of course we are looking for more efficiency, that may be the ultimate result. If the day laborer can double his output, without use of double his energy, but simply by using his energy judiciously, he of course earns twice as much. That principle is the same all along the line. With the organization of society as it is today, that is a proposition.

A Delegate: I was interested in an example from this point of view: I have a friend in the East who is thoroughly interested in these problems, and I think he is sincere in trying to assist people who come to his attention to the most profitable use of their talents and to guiding their ways into the most profitable centers. He has concentrated his attention on the task of the capacities of his employes to very great advantage. He had one workman who was larger than he could afford to pay and his salary was $3,500. He helped that man out into a new position in New York City which happened to be with a large house that handled the product of his factory, and that man went to that house, and took the position which they had to offer him, and so my friend had in both that house and that man the firmest of friends. This is merely an example which shows that vocational guidance has many angles. It is not simply a matter of helping yourself, but you must help the other fellow to do the best that he can at the same time, and of course the ultimate result is beneficial all around. One of the great things it does is to develop the co-operative spirit.

A DELEGATE: May I suggest the policy followed by the Vice-President of our company? He has said that at any time he had an opportunity to send one of his men to a position at a larger salary and in a larger field, he would gladly do it. He feels that it is not only humanitarian for him to do it, but that it is an advertisement for the company.

We have had in our factory two special apprentices, who assisted the factory manager and who had offers, upon the completion of their courses, of very good positions outside of the company's factory. The company let them go. That is the policy that our officers are following.

A DELEGATE: That, Mr. Chairman, is quite general, I think. Our company often recommends a position, entirely apart from any interest to our company, for a young man who has risen as high as he can go in the company and is capable of doing better.

A DELEGATE: Our company maintains a bureau for that purpose.

A DELEGATE: A member of the School Committee in my town had one of his school teachers come to him about January or February asking to be released to go to some other place where she had a better opportunity offered her. We released her as quickly as possible and as a result of our fairness in our dealings we have a waiting list of teachers of the best teachers in the country, from whom we can select. So it has worked out to be a purely selfish proposition.

A DELEGATE: Applying it to an industrial proposition, a manager of a corporation that has that policy is very loath to leave his corporation and go with a company that does not have a similar policy.

A DELEGATE: I was in Pittsburg about three weeks ago on that very problem talking with an engineering organization in a company employing 14,000 men. This company has had just completed a survey by which they have eliminated all dead-end jobs. They found they could not get any men to take inspectors' positions because inspectors were never promoted. They had a great deal of trouble with obtaining inspectors. They made an absolute rule that no foreman would be appointed unless the inspectors had first been gone over to find a man suitable for the position. Within six months they had 200 applications for inspectors' positions. They worked the change from machinists. Their promotions are from machinist to inspector to foreman, general foreman and superintendent of division. As soon as they had eliminated the dead-end positions they found that they had solved their problem and that there were people ever ready and willing to take positions in which there was chance for promotion. I find that that is a defect which is being eliminated in a great many cases, and where it is not eliminated it certainly should be. There are not many men who want to go into positions with the certainty that there is no possible way by which they can go higher. They want a chance to climb where there is promotion ahead of them, and they are willing to work for it. We find that that works out every time.

The Chairman: Twenty-five people have spoken and I think there have been only about three wasted seconds in our meeting. It is now time for us to adjourn.

COMMITTEE ON OFFICE WORK SCHOOLS

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THURSDAY—MORNING SESSION

OFFICE WORK SCHOOLS

THURSDAY MORNING, JUNE 10, 1915

Vice President George B. Everitt, Presiding

The Chairman: In the first Convention paper, in the article written by Mr. Park of the American Locomotive Company, there appeared a paragraph quoting a supervisor of a certain department of a very large organization to the effect that since they had inaugurated their office work school the efficiency of that particular department had increased 25 per cent. I wish Mr. Park were here this morning because I would like to ask him what concern that was. It is the keynote to an aspect of the corporation school movement. Practically every concern that is interested in this movement is viewing it from the greatest need of that particular concern, and it appears that the problem of training apprentices is the biggest problem of most of the concerns interested in this organization. But they all do have office organizations, whether great or small, they all do have definite need of educating or training, and of standardizing the methods and the means that they follow in their offices.

The questionaire which was sent out by the Executive Committee showed better than any discussion or talk that we might have, how comparatively neglected is the office work end of the corporations that are represented in this Association. There are three or four who are doing some work, and the balance are doing practically nothing. So on the first instruction of the Executive Committee to the Office Work Schools Committee—to prepare tabulations as to the plans and the methods by which this work was being carried out—very little if anything was learned because there was nothing to tabulate.

The second thing that the Office Work Schools Committee was given to do was to prepare syllabi or outlines of subjects that would be included in practically any concern considering the teaching of office work. That part forms the report of this Office Work Committee. We have taken two or three subjects such as correspondence, filing, the operation of the business phonograph—things that you will find in any organization—and attempted to prepare outlines which would be of some *definite* value.

Our committee believes that any concern, large or small, that would take those outlines, and adapt them to the particular business involved, would have a textbook or plan, both as to definite instructions regarding policy and as to the manner or routine by which those particular subjects are to be handled. The concern that I happen to be associated with finds its greatest need in the office end of its business, and that, of course, is the one about which we have built up a school.

Another concern may find its greatest need, as I said before, in the apprentice end, and so devote its energies to that. Naturally the people who attend this Convention are the ones representing the greatest need of their organizations, and so it is fairly safe to say that most of the delegates have no interest in the office end. That is not the thing that they came here to find. And so I want to ask the delegates who are here to work together, and to try to get the message to the ones who are not here, to see that this office work report gets into the hands, either of the executive who is in direct charge of the office end of the business, or into the hands of the man who is struggling with the office end.

The office organization, if it is properly organized and properly operated, is nothing but a *service* department. It is not the unfortunate expense as viewed so often by so many people. It can be, and in many concerns is, a service department:

It makes a great difference whether customers are tactfully handled, whether letters are properly written, whether orders are made out accurately, whether specifications are correct or not. I was with an auditing company and know the conditions that exist in at least 100 offices in this country, and I know from definite experience, not from theory, that the office work end is neglected, and it has cost a great deal that is never tabulated, or realized; and I also know that if there were an office work school, no matter how small, there would be great benefit derived. If office work schools are no good, we do not want them. If they are some good, we should all have them.

THE NATIONAL ASSOCIATION OF CORPORATION SCHOOLS

REPORT OF OFFICE WORK SCHOOLS COMMITTEE

The Office Work Schools Committee, consisting of Messrs. Mehren, Scheel, Uhl, Wolf and Everitt, present the attached final report covering its work for 1914-15.

We have prepared outlines on certain office work subjects as follows:

Correspondence	Pages	5 to 15
Filing	"	16 to 21
Typewriting, Stenography, and Phonograph Operation	"	22 to 48

These syllabi give the general outline of each subject and, where necessary, elaborate the various points with examples.

These outlines have been arranged in such a manner as to make it an easy matter for any company wishing to prepare standard instructions covering these subjects to create them by simply following the Committee outlines.

In addition, we have prepared a Bibliography (pages 30 to 36), showing books recommended for use in teaching Office Work subjects, books recommended as collateral reading for *pupils* attending Office Work Schools, and books covering collateral reading recommended for *teachers* in Office Work Schools.

Fifty-four replies to the General Questionaire were received by the Office Work Schools Committee. Due to the fact that but several of the members of the Association are conducting schools for office workers, the information obtained by the Committee through the questionaire was negligible.

We recommend to the Executive Committee that the outlines on the subjects previously mentioned, which constitute the principal part of this report, be placed in pamphlet form so that these outlines may be distributed by the Executive Secretary's office to all companies inquiring for guidance along Office Work lines.

As stated in our preliminary report to the Executive Committee, no attempt has been made to include Accounting in our activities, the preparation of the subject outlines being as large a task as the Committee could successfully handle in the time at its disposal.

We recommend that the preparing of outlines covering additional Office Work subjects be made a part of the work of the Office Work Schools Committee to be appointed for 1915–1916.

Respectfully submitted,

GEORGE B. EVERITT,
Chairman.

April 20, 1915.

OUTLINE FOR CORRESPONDENCE MANUAL

1. FOREWORD—SHOWING IMPORTANCE OF CORRESPONDENT'S POSITION AND TELLING HOW TO BECOME A SUCCESSFUL CORRESPONDENT

For example:

> CORRESPONDENCE MANUAL
>
> TO BECOME A SUCCESSFUL CORRESPONDENT, IT IS ABSOLUTELY NECESSARY THAT YOU HAVE A CLEAR UNDERSTANDING OF THIS MANUAL.
>
> Remember that the policy of the Company is "To deal fairly—to please every customer"—that *you* represent the Company—as far as the one to whom you are writing is concerned, *you* are the Company—that the Company's reputation depends to a large degree upon the manner in which you do your work.
>
> Do not fail to realize your responsibility and give to your work the very best that is in you. If there is any point that you do not fully understand, consult your Department Head or the Chief Correspondent.
>
> Always put yourself in the customer's place.
>
> Do your part to carry out the Company's policy—"To deal fairly—to please every customer."

2. INTRODUCTION

(a) Mail Received, Assorted and Distributed.
(b) Classification of Mail Indicated by Various Marks.
Example: "I" means "Inquiry," "C" means "Complaint," etc.

(c) Date Stamped on Mail to Show When Received in the House or in the Correspondence Department.
(d) First Attention Given to Oldest Dates.

3. THE THINGS WITH WHICH A BEGINNER SHOULD BECOME FAMILIAR

(a) Style Book or Catalog Studied to Become Familiar with:
  (1) Kind of merchandise handled.
  (2) Any special guarantee; or conditions of sale.
  (3) Directions to customers for sending orders.
  (4) Order Blanks provided for customers.
(b) Information Schedule for Correspondents—Giving a Synopsis of Technical Information Regarding Weights, Measurements, Colors, Material, etc., which a Correspondent Frequently Needs in Order to Give Correct Information in a Letter.
(c) Standard List of Words Always to be Capitalized.
(d) Standard List of Words Always to be Hyphenated.

4. WHAT CONSTITUTES GOOD LETTER-WRITING

(a) Thorough Understanding of Letter to be Answered.
(b) Useless Words Eliminated.

For example:

(1) Do not say "Your order is in process of shipment." To the average customer this would mean nothing. Say "Your order is being shipped."

(2) Do not say "We regret to inform you that your order has been delayed." It is not the *informing* that we regret, but the fact that the order was delayed. You should say, "We regret that your order has been delayed."

(3) Do not say "At the present time." *At present* tells exactly the same. *The* and *time* are unnecessary.

(c) Pretentious Terms Avoided.

(1) Do not say "We wish to acknowledge the receipt of your esteemed communication." You should say, "We are glad to receive your letter."

(2) Do not say "We trust the dress is in your possession ere this." You should say, "We hope you have received the dress."

(3) Do not say "In conclusion permit us to solicit your further patronage." You should say, "May we not hope to serve you often?"

(d) Sample Letter of 69 Words Analyzed and Criticized.

February 24, 1914.

Order No. 26,721.

Dear Mrs. Brown:

We have received your letter of February 20th and replying to same we would say that we have investigated our records and find that your goods were shipped by Adams Express on February 18th to Afton, Pennsylvania.

We regret that a delay was necessary and are disappointed to learn that you were caused inconvenience.

We hope that the merchandise have reached you promptly and that same are entirely satisfactory.

Yours very truly,
JOHN GAIL & CO.

Mrs. J. L. Brown,
Afton, Pennsylvania.

(1) All paragraphs begin with the personal pronoun "We." How could we be replying to this customer's letter of February 20th unless we had received it?

(2) Never use "Same" referring back to a noun appearing earlier in the sentence.

(3) Never say "We should say" or "We would state." Say whatever you have to say without awkward or unnecessary prefaces.

(4) Do not say that "We have investigated our records and find, etc." Of course, we have investigated or how could we have reached a conclusion? Furthermore, it would be an insult to the one to whom you are writing, if you communicated with him without taking the trouble to prepare yourself. Instead, simply say, "We find."

(5) Do not say "We regret to learn" or "We are disappointed to learn" in the following connection—when we

have learned of annoyance or inconvenience which a customer has been caused. When anything has gone wrong, we should always be pleased to learn about it so that we may take steps to prevent similar difficulty in the future. The objection is removed, of course, by leaving out "to learn," making the sentence read "We regret that you have had cause to complain of the service you have received."

(6) Merchandise does *not* take a plural verb, but a singular one *always*. To say that "The merchandise have reached you" is, of course, *incorrect*.

This letter is much better expressed as follows and only 42 words are used:

February 24, 1914.

Order No. 26,721.

Dear Mrs. Brown:

Your goods were shipped by Adams Express on February 18th to Afton, Pennsylvania.

We regret that you were caused the inconvenience of writing us and hope the goods will not only reach you promptly, but that you will find them entirely satisfactory.

Yours very truly,
JOHN GAIL & CO.

Mrs. J. L. Brown,
Afton, Pennsylvania.

5. ADDITIONAL RULES

(A page or two should be devoted to certain rules which a company insists upon being observed)

For example:

(a) Always use "Begin" or "Commence" in the following connection: "We will begin work on your suit at once." Do not say "We will start work."
(b) Do not use "Either" in referring to more than two. Do not say "Either of the three." Say instead "Any one of the three."
(c) Avoid ending sentences with prepositions.

Example:

"Kindly advise us what address the goods were shipped from." Say instead "Kindly state from what address the goods were shipped."

(d) Do not say "Please advise the style." In that case style is the object of advise, which, of course, it should not be. It should read "Please advise us the style."

(e) Avoid long sentences; as a rule they are involved and difficult to understand.

(f) Remember that the plural of pair is pairs, never pair.

(g) Use "Hereby," "Therefrom," "Therein," "Herewith," "Hereto," etc., as sparingly as possible.

(h) Never use "Beg" in the following connection: "We beg to say, "We beg to acknowledge."

(i) Avoid split infinitives. Say "We shall endeavor always to please you," instead of "We shall endeavor to always please you."

6. RULES FOR WRITING FOLLOW-UP LETTERS WHEN THE ORIGINAL LETTER IS QUOTED IN THE FOLLOW-UP

For example:

(a) Each paragraph of the quoted letter is to begin ten spaces from the regular left margin. Every other line of the quoted letter is to be indented five spaces from the left margin. The right margin is to be kept as nearly equal to the left margin as possible. Do *not* enclose the quoted letter in quotation marks.

February 24, 1914.

Order No. 21,958.

Dear Miss Harris:

An examination of our records shows that we wrote you on the 30th of last month as follows:

> Please accept our thanks for the order and remittance of $15.91, which reached us on the 28th of this month.
>
> The order is having our careful attention, but skirt Style No. 4912 will be omitted from the shipment as we are unable to furnish it in the color desired. If you will refer to our Style Book, you will find that this model can be supplied in black or navy blue only.

The garment is made of good quality serge, having the fashionable girdle top. Kindly return the enclosed slip when reordering or claiming credit, as it will help us to serve you promptly.

Hoping to receive an answer very soon, we are,

Yours very cordially,

JOHN GAIL & CO.

Miss Fannie Harris,
Brassfield, Kentucky.
AS:MM

(b) If, in writing a follow-up letter, a mistake in the original is discovered, the mistake *must* be corrected in the follow-up.

7. MAIL EXAMINING

(If impracticable for Correspondent to read letters, they are examined by Mail Examiners and returned to Correspondent if incorrect.)

(a) Error May be in Policy, Adjustment, Expression, Grammar, etc.
(b) Benefit Derived from Analyzing Errors Made.—Same Error will Not be Made Again.
(c) Complete, Accurate, Neat Letters.

8. PUNCTUATION TO BE DICTATED BY CORRESPONDENT—FORCE AND SENSE OF LETTER MAY BE CHANGED BY INCORRECT PUNCTUATION SUPPLIED BY STENOGRAPHER OR TRANSCRIBER. FOLLOWING ARE A FEW SIMPLE RULES:

For example:

(a) Indicate closing of one paragraph and beginning of another one by dictating "Period, Paragraph."
(b) Dictate "Comma" as follows:

(1) To separate words in a series, all modifying a word preceding or following. For example: "This fashionable, warm, loose-fitting coat."

(2) To separate sentences or clauses too *distinct* to be joined simply by a conjunction without a comma, or too close to be separated by a semi-colon. For example: "The

high collar and yoke are made of cream-white shadow lace over net, and plaid silk messaline finishes the collar."

(c) Dictate "Semi-colon" as follows:

(1) To separate groups of words which are themselves divided by commas. "We can supply the dress in black, navy blue or wine color; each trimmed with heavy, lustrous black satin."

(2) To separate sentences, especially before "but."

For example:

"Long ago we learned this lesson: Not to trust to the appearance of a material, not to trust to any one's opinion; but to analyze the material chemically; to test it and try it and prove it worthy."

9. REPETITION DISTINGUISHED FROM EMPHASIS

(a) Emphasis—Strength and Sincerity Given by Repetition of Word or Thought.
(b) Repetition—Great Obstacle in Usual Sense.—Overcome by Enlarging Vocabulary, thus Gaining Command of Synonyms.

10. LENGTH OF LETTERS

(a) Determined by Nature of Case.
(b) Long Letters Avoided.

11. SUCCESS OR FAILURE OF COMPANY DEPENDENT IN A LARGE DEGREE UPON WORK OF CORRESPONDENT THROUGH DIRECT CONTACT WITH CUSTOMER

(a) By Influencing Persons to Send Orders.
(b) By "Straightening Out" any complications in Connection with Previous Orders. (Explained fully under "Adjustment Mail.")

12. PREPARATION FOR DICTATION

(a) Letter Carefully Read.
(b) Customer's Characteristics Studied.
(c) Reference to Style Book or Information Schedule.

13. INQUIRIES CAREFULLY ANSWERED

(a) The Correspondent Compared to a Salesman.
(b) "Talking" Letters Possible through Interest and Enthusiasm.

14. OPENING PARAGRAPH—ONE OF THE MOST IMPORTANT PARTS OF LETTER

(a) Stereotyped Paragraphs to be Avoided.

For example:

(1) "Your letter of December 15th has been received and contents have been noted."

(2) "We are pleased to acknowledge receipt of your letter of December 15th."

(3) "Your letter of December 15th has been given our careful attention."

(b) Original and Effective Paragraphs to be Used.

For example:

(1) "It is easy to understand why you are interested in hat, Style No. 15928, as it could not fail to interest any person of refined taste."

(2) "It is a pleasure to answer questions—to tell others about our goods and their wonderful values."

(3) "It was a pleasure to receive your letter asking about shoes, Style No. 30813."

15. ARRANGEMENT OF FACTS

(a) Favorable Impression Made by Placing Most Interesting and Important Things First.
(b) Secondary Points Arranged According to Relative Importance.
(c) Paragraphs to be as Nearly Equal as Possible. To Give the Letter a Well-balanced Appearance.

16. CONCLUDING PARAGRAPHS

(a) Stereotyped Paragraphs to be Avoided.

For example:

(1) "Hoping that you will receive your goods without further delay."

(2) "Awaiting your reply with interest."

(3) "Trusting that we shall be favored with your order."

(b) Original and Effective Paragraphs to be Used.

For example:

(1) "We hope to serve you often. Will you not give us the opportunity?"

(2) "Why not get all the worth, all the value you can for every dollar you spend? When you can get goods at lower prices, why be satisfied with things less desirable? Why take less beauty, less worth—and pay more besides?"

(3) "You, too, may have absolute satisfaction and an actual saving of money. You may have the pleasure of the Season's very newest and most stylish models that will not only delight you, but receive the admiration of your friends. Why not order at once—to-day?"

17. THE STYLE BOOK OR CATALOG AN AID TO SALESMANSHIP BY THOROUGH MASTERY OF SALES IDEAS, AND CULTIVATION OF PERSONAL AND PLEASING STYLE

For example:

(1) "We want to be sure that you, too, have your share in the saving to be gained from these remarkable bargains."

(2) "Do not fail to read Page 6 of the Catalog. It tells just a few things we have learned in our twenty-six years' study of Ladies' garments."

(3) "There are a few women in every town who spend comparatively little for clothes and yet are always well dressed. As we have often said, it is not so much the amount spent, but where the clothes are bought that really counts. Our Money-Saving values will enable you, too, to dress well at a very low cost."

(4) "Should not you, too, like a hundred thousand other ladies, save money and secure better styles in your skirts—more grace and added personal beauty, by wearing one of *our* tailored skirts?"

(5) "Higher quality, better style, grace and charm, and a saving—better value, more real worth and service, and a

lower price—those are some of the advantages you get when you buy our goods."

(6) "It is simply that we have placed our best efforts at your service, we have voluntarily put our best skill at work for you."

(7) "Our waists are famous for their style and beauty, and above all for their remarkable value."

18. SAMPLE REQUESTS

(a) Can Comply with Request—Example of Appropriate Paragraph:

"It was a pleasure to receive your request for samples and the enclosed assortment has been selected with special care."

(b) Requests for Unusually Large Assortments—Can Not Send Entire Assortment—Few Samples to Give General Idea of Quality, etc.

Example of Appropriate Paragraph:

"These samples will give you a general idea of the quality of our goods and their values. If you will tell us what kind of goods you are most interested in, we shall be pleased to make a special selection for you."

(c) Cannot Comply with Request—Example of Appropriate Paragraph:

"We are unable to send samples of the trimmings used in our Ready-Made Garments. However, if you have ever seen one of our garments, you know something about the careful attention given to trimmings—that they are always artistic and of the finest quality. We never use any that do not harmonize perfectly both in color and texture with the material in the garment."

19. ADJUSTMENT MAIL—COMPLAINTS OF UNSATISFACTORY SERVICE, ETC.—Principles same as given under "PREPARATION FOR DICTATION"

(a) Adjustment Made by Correspondent or Adjuster from Record of Order—Standard Forms which Cover Cases of Frequent Occurrence, Sent if Applicable—If Not, Form Embodied by Correspondent.

(b) Adjustment Verified if Made by Adjuster, and Analyzed to Determine Reason for Embodying a Standard Form in a Dictated Letter instead of Sending the Form—Letter Based on Synopsis of Case Given by Adjuster.
(c) Customer Always Given Benefit of the Doubt.
(d) Adjustment Sometimes Consists of Selling Goods Over Again.
(e) No Adjustment Refused without a Good Reason—Reason Thoroughly and Courteously Explained.

20. CONCLUSION—THOUGHT—IMAGINATION—CONCENTRATION AND EFFORT—THE FOUNDATION FOR SUCCESS

For example:

Cultivate the habit of thinking. Most people fail because they have not trained themselves to think—it is not beyond their power, but they simply have neglected to develop that faculty. Thinking in sequence is essential to correct dictation.

Think of the customer as a friend. Consider her taste and surroundings, then conduct an imaginary conversation with her.

Concentration is essential to success in any kind of work, and especially so in your work as a Correspondent. Cultivate it by strict personal discipline. Errors are usually traceable to lack of concentration.

The Development necessary to success is not spontaneous; but can only be achieved through hard, consistent and earnest study—determination and application.

OUTLINE FOR FILING MANUAL

1. Foreword—Importance of File Clerk's Position

For example:

> ## FILING MANUAL
>
> TO BECOME A SUCCESSFUL FILE CLERK, YOU MUST THOROUGHLY UNDERSTAND EVERY DETAIL OF THE INSTRUCTIONS IN THIS MANUAL. THEY ARE A GUIDE TO YOU SO THAT YOU CAN DO PERFECT WORK.
>
> Filing is only of value if you can find the ***papers when you want them.*** This means accuracy in placing papers in file, and care and thought in looking for them when requested.
>
> A *Lost Record* may mean a *Lost Customer.* Prevent this; then you are fully realizing your responsibility; you are carrying out the Company's policy "To deal fairly—to please every customer."

2. Introduction

Filing points in general:

- File Cabinets—
  - Sightly, neat receptacles for valuable records.
  - "A place for everything and everything in its place."
- Indexing Headings and Sub-headings Index Cards—
  - To aid in quickly locating records desired; unnecessary papers are not handled in the search.

- Methods—
  - Vertical.
  - Horizontal.
  - Flat.
- Systems—
  - Alphabetical.
  - Geographical.
  - Numerical.

3. POINTS FOR THE BEGINNER

(a) Filing Equipment—

File Sections arranged to divide the work about equally. Kinds of filing equipment separated, such as:

Cards—
Small drawers.

Sheets—
Low, flat drawers.

Correspondence—
Wide, deep drawers.

(b) Filing System.

For example: Geographical.

Papers to be filed are to be assorted into the headings under which you file. For example: State—Town—Name.

(c) Filing in front or back of Index or Guide Card.

(d) The papers you are to file.

For example:

Sheets—after shipment or adjustment, etc., is made.

(1) Explain kind of sheets; Order Blank used as sheet, etc.

(2) Explain the marks on the sheets showing instructions followed; (stopping papers not ready for file).

For example:

Shipping Stamp.
Back Order, Cancellation, Held, Made, etc.
Refund or Credit Made.

(e) Neatness.

Papers should be of uniform size.

Use of folders for making uniform filing unit for uneven papers. Folders for horizontal and vertical filing.

4. ESSENTIALS FOR ACCURATE FILING

Accuracy of filing is almost the sum total of requirements. Filing may as well not be attempted, unless the filing is accurately done. For this result, the following qualities are essential:

(a) Thorough understanding of alphabetical sequence.

For example:

That P is after O and before Q; that *Nad* is filed before *Nan*.

(b) Ability to read handwriting of all kinds.

(c) Ability to interpret signatures.

Ability to quickly get the gist of what customer means.

(d) Rapid execution of the duties assigned, following the above.

5. AIDS TO EFFICIENCY

To assist File Clerks, the equipment, properly used, will greatly assist in obtaining the efficiency desired.

(a) File drawers properly marked with contents.

Proper cabinet is quickly located.

(b) Guide Cards (already in File).

Proper space in file is easily found.

(c) Assorting books (see 8A).

Time saved and rehandling eliminated.

(d) Efficiency Records.

Clerks can judge for themselves if their work is satisfactory and at the same time recognize and correct their own weaknesses.

6. CHARGE SYSTEMS—USED WHEN PAPERS ARE DRAWN FROM FILE, TO KNOW WHO HAS THEM AND HOW LONG

For example:

(a) *List* shows papers drawn, date and by whom; entry is crossed out when papers are returned (or some other method to close the entry may be used).

(b) *Charge Sheet* shows papers drawn, date and by whom; it is filed in place of papers and destroyed when papers are returned.

7. DUTIES OF CLERKS ASSIGNED TO FILING

For example:

Responsibilities may be divided according to experience and efficiency as well as by amount of filing and looking up required.

8. Part i.—File Clerk Work—(May be handled by one clerk)

(a) Assort papers for file, rough assorting by State; then alphabetically by Town. Final assorting of each Town alphabetically by Name. Use Assorting Book. (See 5C.)

Assorting Book is a book having heavy cardboard leaves, each marked according to the System of Filing.

For example:

In Geographical Filing, there will be one Assorting Book arranged by State—Alabama, Arkansas, Connecticut, etc.

Another Assorting Book indexed with the letters of the alphabet is used for assorting each State by Town. Then, by clearing the book, the same indexes may be used for assorting by name.

(b) File papers in proper place.

For example:

Papers for Mrs. Robert E. Lee,
Richmond,
Virginia,

File in Virginia drawer containing Virginia
back of Richmond,
under Lee,
after Q. Lee,
before S. Lee.

Of course, Robert *D.* would precede Robert *E.*, and Robert *F.* would follow.

(c) Verify Files—see that proper sequence is maintained.

(d) Verify addresses for which no Index Card is found and have Index Card made, or correction attended to.

For example:

Sheet is marked "Plana, Texas." No such town. Sheet is corrected to "Plano, Texas," and filed in proper place.

Index Cards may be made for towns which exist but are not Post Offices.

(e) Look up requests for papers.

9. PART 2.—FILE CLERK WORK—(May be handled by another clerk)

(a) Look for papers requested by other clerks or Departments; attach all papers found and send to person requesting them.

(b) Assort, file and verify all papers in one small section as training for promotion (when duties are divided between two clerks).

10. CASES WHERE RECORDS ARE NOT FOUND WHEN REQUESTED

(a) Handling of—

(1) Special Requests.

For example: Special investigation may be required.

(2) Charge Sheet or Record is found (some one has already drawn papers).

For example: Papers may be recalled from person, or special request simply marked to show date papers were drawn or who has them.

(b) Records of Percent. ***not*** found are direct reflection on accuracy of filing and of look-up. If papers are properly filed, they should be found when desired.

11. CONCLUSION—THOUGHT—CONCENTRATION AND EFFORT—THE FOUNDATION OF SUCCESS

For example:

Think of the customer as a friend.

Her letters, on which you look up the papers, are requests for a favor, or a statement that she is not pleased. Without records your friend will not be properly served; so it is up to *you!*

Get the habit of thinking.

Many people fail because of failure to think quickly and correctly.

It is not impossible to develop; the matter is in your own hands.

Give the work the attention and thought it demands. Cultivate concentration by watching yourself; prevent error.

Your success and advancement are assured if you faithfully strive for results.

OUTLINE FOR STENOGRAPHERS, PHONOGRAPH OPERATORS AND TYPISTS

1. FOREWORD—SHOWING IMPORTANCE OF WORK AND QUALITIES ESSENTIAL TO SUCCESS

For example:

MANUAL FOR STENOGRAPHERS, PHONOGRAPH OPERATORS AND TYPISTS

THE LETTERS SENT BY THIS COMPANY SHOULD BE ABOVE CRITICISM, BOTH IN COMPOSITION AND MECHANICAL EXECUTION.

First impressions are formed from the appearance of a letter, in the same way as from a person's clothes.

To convey the desired effect, the letter must be neat, carefully arranged and, most important, well expressed.

The first two lie absolutely with you. Smudged, misspelled, uneven letters will affect your standing much more quickly than any other part of your work.

The subject matter rests with the dictator. But your common sense and knowledge of English must be constantly exercised for the proper interpretation of the dictation.

Thoughtful, careful attention to the work assigned is essential, as well as judgment and tact in handling detail.

Following these rules means efficiency. Efficiency is another word for success.

2. GENERAL RULES

(a) Attitude toward work.

Familiarity with the subjects usually covered by the correspondence handled is much to be desired and should conscientiously be striven for.

A knowledge of business methods means more intelligent work.

(1) The commodity sold.

(2) Selling Methods.
    Salesmen and Agents.
    House Organ.
    Catalog.

(3) How orders are received and handled so that customer gets what is paid for.

(4) Forms, Order Blanks and all printed matter issued or used by the Company.

(5) Inquiries, Adjustments—handling of each.

(b) Care of Machines.

(1) Clean and dust the *Typewriter* and the *Phonograph* daily (assign morning or evening). Take particular care not to catch cloth or brush on any of the machine parts. (Especially phonograph.)

(2) Oil both machines once weekly.

(3) Report any repairs required, or any trouble *immediately* to person in charge.

(c) Office and Routine Rules.

(1) Unless a Rule Book is issued, give instructions about working hours, luncheon, time off, punctuality, absence, vacations, etc.

(2) When a clerk spends her time on different kinds of work, records are sometimes kept of the amount of time spent on each. Explain in detail how this record or report is made.

3. STATIONERY

Some companies find it valuable to indicate special instructions regarding stationery used for various purposes, by attaching a slip to the papers. This slip lists the usual letterheads, etc., and enclosures used. Each is numbered. The Correspondent encircles the number opposite instructions to Transcriber, and pins to top of papers. In this list should appear:

(a) Letterheads and mailing envelopes (varying imprints, sizes).
(b) Return envelopes (when and how used, high signs; kinds).
(c) Miscellaneous enclosures; order blanks, advertising matter, etc.

4. INTERPRETATION OF DICTATION—(Stenographic or Phonograph)

Give explanation of the company's rules to Correspondents on dictation.

For example:

(a) Correspondent dictates punctuation, paragraph, name, **dates,** figures.

(b) Confirmation of these facts supplied on a memo slip accompanying the papers.

5. IDENTIFYING LETTERS

The simplest method is to number the letters as they are dictated. Phonograph Correspondents number the letter and the space on the Phonograph Slip showing dictation on it. Stenographer should number the letter and her book as she takes down the dictation.

For example:

"The Phonograph Slip which accompanies each cylinder is marked to show where each letter begins. The space is numbered and the corresponding papers bear a similar number." (See page 32-b.)

6. CARBON COPIES

(a) Number required.

For example:

"Two carbon copies are required when papers are to be filed. The first accompanies the papers to the file; the second is used in measuring your efficiency."

(b) Colored carbons for various purposes.

For example:

Color may show *where* papers are to be filed.

(c) Economy.

"On two-page letters a second manila sheet is not required; invert the manila and write remainder of letter on the reverse side."

7. CARBON PAPER

Be sure to use proper size carbon for stationery. See that it is free from wrinkles, which spoil the copy. Turn frequently so as use up all parts of the sheet.

TYPING THE LETTER

8. Order of Answering—Letters to have Preference

These, of course, differ in each company. In one, it may be those containing a remittance; in another, refund letters; in a third, preference is given according to how long the mail has been in the house.

9. Dating

(a) Position.
(b) Numerals or written out.
(c) Change date at given hour.

For example:

"The date must be placed in the upper right-hand side under the heading. The month is written in full, then the day followed by a comma, and the year. Do not place a period after the date.

On ordinary business stationery, 8½ by 11 inches, the end of the date line is to come as nearly as possible at 80. To accomplish this, the following scale has been arranged: in the months from September through February begin the date at 64; from March to August at 67.

Letters transcribed up to 4 P.M. are to be given the date of transcription. All letters transcribed after 4 P.M. are to be dated the following day.

Letters returned for correction are to be corrected the same day if possible."

10. Recipient's Name and Address

Most companies write the name and *address* of the customer on the letter, as it is thus identified immediately at all times.

This address may be placed either at the beginning or the end of the letter, and may include or omit the local address, as preferred.

For example:

Miss Maude Brown
10 Market Street
Dover, Delaware

Mrs. Katherine Wilcox
Wilmington, Delaware

11. ESTIMATING THE LENGTH

Special attention must be paid to placing the letter. In every instance the typewritten matter is to be as nearly as possible in the center of the page, that is, the space under the letterhead and the space beneath the letter should be approximately the same.

No positive rule can be given with regard to the point at the top of the page at which the address and salutation are to be placed. It is a matter of careful judgment.

The phonograph Slip that accompanies the cylinder is a guide, though the dictation of different Correspondents varies greatly in amount of typewritten matter. Some Correspondents speak quickly and without hesitation, so a relatively small part of the cylinder would be used. Hesitation, corrections, etc., also take up space. A Correspondent's habits of dictation should be carefully considered before beginning to type.

As a general rule, any letter occupying less than five spaces on the slip is a "short letter," and is placed well down on the page. A letter using from six to twelve spaces is a "medium-sized letter" and is placed a little higher on the sheet. Any letter covering thirteen to twenty-five spaces is about a "full-page" letter, and starts well up on the page. Any letter covering more than twenty-five spaces on the Phonograph Slip, in all probability, requires two sheets.

12. SALUTATION

(a) Salutation depends upon relation of writer and recipient. Explanation of kinds of salutation used, and reasons, is necessary.

For example:

Dear Mr. (Mrs., Miss)....................:
Dear Sir (Madam)........................:
My dear Mr. (Mrs., Miss)................:
My dear Sir (Madam).....................:
Gentlemen:

(b) Indentation of salutation.

Depends upon width of letterhead. Usually on margin with body of letter.

For example:

"On 8½-inch letterhead, begin at 20."

13. PARAGRAPHS AND MARGINS

(a) General instructions on paragraphing.

For example:

"Proper paragraphing is very important in letter writing. Long paragraphs, on the whole, are to be avoided; try to keep the length of the paragraphs about equal.

A passage distinct in topic from what precedes or follows is to be written as a separate paragraph.

In all letters the first line of every paragraph is to be indented. Numbered paragraphs are indented the same way.

No lines except the first are to be indented at all."

(b) Specific instructions on paragraphing.

Example:

"Begin each line at 20. End as nearly as possible at 80. Begin paragraph at 40."

(c) General instructions for margin.

Example:

"All margins are to be equal, that is, the blank space around the typed matter is to be about the same on all four sides.

The size of the top and bottom margins depends upon the length of the letter, and your judgment is your only guide.

The side margins can be more definitely guided.

When a paragraph is quoted in the body of the letter, both right and left margins of the quoted paragraph must be indented at least five spaces further than the regular paragraphs."

(d) Specific instructions for side margins.

For example:

The *left* margin is controlled by the left marginal guide, which should be set at 20. There is no excuse for an uneven left margin.

The *right* margin depends upon the words ending the line. In attempting to keep this margin even, it is often necessary to divide a word of several syllables, placing the last part on the next line. (See page 35.)

To further assist you to keep this margin even, the following facts should be observed:

Under no circumstances let the line extend beyond 83.

Better stop at 76 than at 85.

Better divide a word at 76 (or up to 83, of course) than to extend to 84.

Place the right margin guide at 80; this causes the bell to ring at 75.

If necessary to go beyond 80 (up to 83), press the Right Release Key.

14. Two-page Letters

Instructions for the heading of the second page of the letter require illustration. Some firms simply number the page, either at top or bottom. Others write the customer's name at the top, as well as the page number. Some place no marking on second page at all.

Example:

"On the second page, directly under the heading, write the figure '2' at the center of the *top*, preceded and followed by a dash, thus: —2—."

15. Complimentary Closings

Each company has its own ideas on complimentary closings and signatures—especially the latter. Some use the firm name, some that of an individual, either of which may or may not be modified by a phrase describing the position of the person or the name of the department from which the letter was sent.

Examples of complimentary closings:

(a) Yours very truly,
(b) Cordially yours,
(c) Very truly yours,
(d) Yours cordially.

Examples of signatures (may be all in capitals):

(a) The Jones and Brown Company.

(b) The Jones and Brown Company,
Circulation Dept.—Agency Division.
(c) The Jones and Brown Company,
District Manager.
(d) John J. Jones (signed),
Vice President.

16. IDENTIFYING THE DICTATOR AND THE TRANSCRIBER

In all companies where a number of different people dictate letters, it is customary to show the initials of the dictator and transcriber in the lower left corner. When one stenographer handles the work of more than one dictator, she should be supplied with a list showing initials and names.

There is much difference in the way this is done, but one point is always true: the dictator's initials are written first.

The differences lie—in the way the initials are separated and the number used.

For example: ABC:JWJ
ABC JWJ
ABC/JWJ

Again, only the last initials of both dictator and transcriber may be used, thus: C:J, or the full initials of dictator and last initials of transcriber—ABC/J.

17. HOW TO PIN AND DELIVER TRANSCRIBED LETTERS

Instructions should be clear as to disposition of original letter, carbon copy, and papers.

Example:

"Place original letter, enclosed in envelope, in 'Mailing Basket.' File (or place in basket for file) papers for Filing Department (or clerk)."

18. OFFICE DETAIL

In many companies the stenographer handles more or less Office Detail, and instructions regarding these are necessary.

For example:

(a) Tickler File.

There are various kinds of such files, and the procedure for filing and following up must be carefully explained in each case.

For example:

"The dictator may wish the papers brought to his desk at a later date; he writes the date in the upper right corner.

File papers (under date indicated) in tickler file (arranged by date). It is part of your work daily to draw papers whose 'tickler date' is due."

(b) Cross References:

Cases where two or more names (or addresses) are concerned in one transaction are handled in different ways. In all cases a record is made under each name, and refers to the other, so that information can be found.

For example:

"It is sometimes advisable to file the correspondence of two persons under one of the names; for instance, the correspondence of John Brown, subscriber, under the name of James Smith, agent."

When this is necessary the dictator requests that a cross reference slip be made out, indicating for which name the slip is required.

The transcriber is to write on a sheet of manila paper the name and address of the person whose correspondence is to be filed under another name together with the following notation: "Filed under James Smith." The cross reference sheet is filed under the name of John Jones to show that his correspondence may be found with that of James Smith—in the above case the cross reference slip is filed under the name of John Brown and the correspondence under James Smith."

(c) House Notes.

Some companies require inter-department mail to be typed in certain ways. Samples of special forms, fill-ins, etc., should be given.

For example:

"House notes and memoranda are to be written on the regular memo sheets provided.

Extracts of letters are frequently made and sent from one Division to another. These extracts should be made on the regular sheets provided."

19. DETAILS FOR PHONOGRAPH OPERATOR

These essential points, common to all phonograph operation are:

(1) The electric circuit must be completed.

(2) The cylinder must be placed on the holder.

(3) The reproducer must be placed as far to the left as possible, so that complete dictation is heard.

(4) The amount listened to at a time must be regulated, so that complete, accurate transcription can be made.

A description of how each of the above is accomplished depends, of course, upon the make used.

For example:

(a) Description of phonograph.

In this description, only enough information is given for a working knowledge of the machine. It is desirable for you to have as much technical knowledge about your machine as you can, and your chief will gladly give you all additional information desired.

The phonograph is driven by electricity. To complete the circuit (so that the reproduction can be made), push the black switch at left side of machine to word "on."

The cylinder is wax with a hollow center, having one opening considerably larger than the other. As the wax yields quickly to the pressure of the fingers, lift the cylinder by inserting the fingers in the smaller end. Never grasp the outer surface of the cylinder with the bare hand. Push the cylinder firmly over the holder. If a cylinder is only partially on, it will revolve out of true, and produce an uneven dictation.

To remove, press down the cylinder ejector with the left hand, and push the cylinder off the holder. Receive the cylinder from the holder by inserting the fingers in the opening as before. If you find it difficult to remove a cylinder, place a piece of thin paper around it and warm it with the hands. It will come off very easily in a few moments.

The reproducer is marked "reproducer." The upright handle is used to raise the reproducer so that the cylinder can be placed in position, or removed, and to place reproducer to point desired.

In order that the transcriber may regulate the quantity listened to and typed, the finger "start" and "stop" buttons are provided, which respectively start and stop the cylinder. The "foot trip" is used for the same purpose, and is preferred, because it does not require removing the hands from the typewriter.

Place the heel on the foot rest, and press down firmly with the ball of the foot, the sound of the voice will then be heard. Write a phrase at a time, raising the foot quickly to stop the machine. If the foot is raised slowly the reproducer will drag on the cylinder, making the words indistinct. When ready to write the next words, press the foot down quickly again.

(b) Phonograph Slip.

Accompanying each cylinder will be a Phonograph Slip showing the number of spaces taken by each letter. The scale on the Phonograph Slip corresponds to the Index Scale on the front rod. Consult the slip before beginning to type. If corrections are marked, listen to them, and when form paragraphs are indicated, ascertain their length.

(c) Handling of finished cylinders.

The disposition of cylinders which have been transcribed should be clearly explained.

(1) How *long* cylinders are retained before being shaved.

(2) *Where* kept during this period.

(3) *Who* collects and shaves them.

For example:

"Keep finished cylinders on rack provided, with phonograph slip *folded* inside. They will be collected twice daily by clerk assigned and placed on cylinder stand. Each morning, all cylinders except those transcribed after 4 P.M. are collected by Cylinder Boy to be shaved."

(d) Unfinished cylinders.

(1) Where kept.

(2) How indicated (so as not to mix with finished cylinders).

For example:

"Unfinished cylinders should never remain on the phonograph over night.

If a cylinder is incomplete, on the Phonograph Slip, draw a line up to the beginning of the first letter yet to be transcribed, and sign your initials and the date below. Place cylinder in rack with memo slip placed as though entire cylinder were to be written."

20. DETAILS FOR FILL-IN TYPISTS

It has been found expedient to answer many requests by so-called "form letters." These form letters are of two kinds:

(a) The letter which merely acts as a sample for the typist to copy.

(b) The letter which is multigraphed in quantity, which requires the name and address to be filled in, so as to give the impression of a personal letter. The filling in of form letters is done in one of two ways:

(1) The fill-in to *contrast* with the color of the form letter.

(2) By filling in to *match* the color of the form letter.

Multigraphed letters or forms do not all run the same shade, which makes it possible to select those that match the ribbon in the machine. The changing of ribbons will then be reduced. Adjust the typewriter so that every letter can readily be inserted with the left margin in proper position for the address and salutation.

Then roll back the paper so that the first line touching the left-hand margin is visible above the typewriter scale indicator. Roll back seven spaces, for a three-line fill-in followed by two spaces; the salutation and again two spaces before the body of the letter.

For example:

"Mrs. John Jones
432 Walnut Street
Dover, Delaware

Dear Mrs. Jones:—

We have your letter in which you ask us to send you an order blank, etc."

The date of the letter should be placed according to the instructions already given under 'dating.' "

(c) Addressing Envelopes.

"In addressing envelopes for circulars and letters that require no fill-in, take care to select a ribbon which will match the type in the letter to be enclosed."

General Rules for Capitalization, Syllabication, and Punctuation

This manual has been prepared as a reference book. Typists are not held responsible for the material herein contained, but certain common difficulties have been presented for ready reference and each typist is encouraged to use the manual when in difficulty.

The rules given are not iron-clad, and should always be interpreted according to the meaning which is to be expressed.

Capitalization

The use of capitals is in a great measure a matter of taste and judgment.

As a general rule, capitalize all names; including Christian and Surnames; Religious Sects; Political, Civil and Military Organizations; Political Divisions; Holidays; Historical Events; Streets, Squares, Theatres, Halls, etc.

Division of Words--Syllabication

Words should be divided in writing as they are pronounced. The following rules and examples will show the proper way of dividing words in cases where any doubt is likely to exist.

But avoid divisions when possible and never have two divisions come at the end of two succeeding lines:

(a) Where a *single* consonant comes between two vowels, usually join the consonant to the first vowel if short, but to the last if long, as,

ri-val
pro-vis-ion
con-ve-nient
hol-i-day

(b) Where *two* consonants come together between two vowels, divide the consonants; as,

plain-tiff
ap-pel-lant
af-ter
im-por-tant

(c) Where *three* consonants come between two vowels, the first of which is short, place all which can be pronounced together with the *last* syllable; as,

chil-dren
twin-kle
chuc-kle
trem-ble

(d) In doubtful cases better divide upon the vowel; as,

pre-de-ces-sor
pro-duce
me-moir
dou-ble
trou-ble

(e) As the letter "x" rarely begins a word in English, do not use it to begin a syllable; nor use "j" to end a syllable, as it never ends a word. Also, as "q" never occurs in English without "u" following, never separate it from the "u"; as,

ma-jes-ty
pre-ju-dice
anx-i-ety
li-qui-date

(f) The terminations *in* and *ing* and *ed* (and the plural *es,* when making an additional syllable), form separate syllables.

The termination *er,* when added to a verb ending with a consonant or a silent *e* to form a noun, also forms a separate syllable; but the termination *or* does not; as,

mak-er
com-man-der
form-er
ac-tor
pro-tec-tor

Punctuation

(a) *The Comma* (,)—The proper use of the comma is of the utmost importance, for by it the full meaning of the writer is expressed. While it is often asserted that the use of the comma is entirely a matter of taste, it is really founded on certain definite principles.

Grammarians often differ in their theory of punctuation, but the typist is expected to become familiar with certain rules that will bring out the meaning of the sentence, and thus save time and expense in making corrections.

(1) A simple sentence requires no comma; as,

A single copy of a daily newspaper sells for one cent.

(2) Use commas generally before and after parenthetical clauses; as,

Fashions, as well as recipes compiled by experts, are to be found in leading Women's magazines.

(3) Use commas before and after a negative clause when introduced by way of contrast or oppositon; as,

The circulation of large publications has not attained its size by chance, but by the systematic work of the management.

(4) If parts of the sentence are inverted, use commas both before and after the clause introduced by the conjunction; as,

Check payments, a method of securing receipts much used in modern business, are handled through the Clearing House.

(5) Where three or more words of the same part of speech or, similarly, a number of short phrases occur, the last two of which are connected by a conjunction, use a comma before the conjunction; as,

Lincoln, Garfield, and McKinley are three well-known names in American history.

(6) Place a comma after the following and similar words when they introduce a sentence, and refer to the whole idea, or when they introduce contrasted clauses; as,

again
further
yes
here
there
then
now
why
first

Yes, the Department of Agriculture is invaluable to farmers.

Omit the comma when such words are introduced so as not to interfere with the harmony of the sentence; as,

> The daily newspapers publish many articles on baseball also.

(b) *The Semicolon* (;)—Use the semicolon to separate clauses (independent or dependent) when the meaning is not so closely related to the rest of the sentence as to require a comma or connecting word. This is especially true when one member contains a comma; as,

> Magazines are an extensive advertising medium; the demand for space is increasing rapidly.

The common belief that a sentence ending with a preposition is incorrect is much discussed; while such sentences abound in good literature, the emphasis may not always be placed as the writer intended.

(c) *The Colon* (:)—(1) The colon introduces a formal or long, the comma an informal or short quotation.

(2) Use the colon to mark a wider separation than that marked by the semicolon.

(3) Use the colon to introduce a series of statements or specifications when formally introduced by a general statement, or by THUS, AS FOLLOWS, etc.

(d) *The Interrogation Point* (?)—Use the interrogation point after every sentence or expression asking a direct question.

(e) *The Exclamation Point* (!)—The exclamation point, when properly used, adds force to language. It is most effective when used sparingly.

(1) Use the exclamation point after interjections and all words, phrases, and sentences that express surprise, emotion, or command, and after the word of address when strong emotion is indicated.

(2) Use the exclamation point to express doubt or sarcasm.

(f) *The Apostrophe* (')—Use an apostrophe in elisions or contractions in place of the omitted letter or letters; as,

I'm	isn't
don't	you're

Form the plural of the letters of the alphabet and of other characters by adding *'s*; as,

> Dot your i's and cross your t's.

(g) *Quotation Marks* (" ")—Two inverted commas before a quotation and two apostrophes at the close of it are called "Quotation Marks."

(1) Use quotation marks to enclose a *direct* quotation, but ***not*** to enclose an *indirect* quotation; as,

> "To bear and to forbear," said the minister, "is essential to the happiness of every home."

(2) When a quotation mark, as well as an interrogation or exclamation point follows the same word, the interrogation or exclamation point should stand first if it applies to the quotation alone; but the quotation mark should stand first if the other mark applies not to the quotation merely, but to the sentence as a whole; as,

> He said, "Will you subscribe?"
> Did he say, "I will subscribe next year"?

(3) Quotation marks may sometimes be used to indicate apology for slang or nicknames; as,

> We believe in a "square" deal.
> We want you to be a "live-wire."

(4) Use single quotation marks to enclose a quotation within a quotation; as,

> At a recent meeting of the typists the supervisor said. "A girl came to me the other day, saying, 'Do I put a period at the end of the date line?' I answered, 'No.' "

(h) *The Dash* (—)—Explain what special preference is given in regard to spacing before and after the dash, and whether it is to be typed once or twice.

The dash should not be used indiscriminately, where commas, periods, or other marks of punctuation belong.

Use the dash:

(1) When a sentence is abruptly broken off before complete; as,

> If I do not buy a new suit soon—by the way, where did you buy yours?

(2) After a comma, to increase the separation slightly; as,

> In taking subscriptions, only one thing is necessary,—confidence in your publications.

(3) Use the dash as a substitute for parenthesis marks; as,

> The population of New York—you realize that this is the largest American city—is increasing year by year.

(i) *Parenthesis Marks* ()—Use parenthesis marks when an explanatory clause or phrase is placed in a sentence grammatically complete without it.

When any other punctuation mark is necessary in the sentence at the point where the parenthetical sentence belongs, it is put after the closing parenthesis; as,

> I will ask him to renew his subscription (assuming that he has already subscribed), and I am positive he will do so.

(j) *Compound Words*—A compound word is one made up of two or more words retaining their separate form and significance. Words should not be compounded when separate words will convey the same meaning and many words formerly written with a hyphen are much better as single words.

The use of the hyphen should be established by business houses to apply particularly to conditions in their own correspondence. A definite and careful list of these should be prepared and supplied to each typist. Some of the more general grammatical rules are given below, and should be carefully considered when making the list.

(1) *Prefixes*—When the prefix *pre* or *re* is united with a word beginning with *e,* and prefix *co,* use a hyphen; as,

pre-exist	co-respondent
re-enter	co-operate

(2) *Points of the Compass*—Points of the compass should be one word; as northwest, southeast, southwest; but north-northeast, west-southwest, etc., should have the hyphen used.

(3) *Fractions*—Should be made two words; one half, two thirds, etc. There is no more reason for making one half a

compound word than there is for making one man or one horse a compound. But when used as an adjective or when combined with a noun, they should be compounded; as,

one-half interest, one-man power, one-horse sleigh.
half-dollar, half-barrel, half-way.

(4) *Colors*—Expressions like brownish yellow or yellowish white are compounded. But where a noun is used as an adjective expressing color, the word should have a hyphen; as,

lemon-yellow, silver-gray, olive-green, etc., also red-hot.

(5) Compounds of a noun in the possessive case with another noun are not infrequent; as,

bird's-eye, king's-evil, crow's-nest.

(k) *Miscellaneous Rules*—Confusion about the correct usage of certain words because of their similarity of sound or of use in a sentence will be much reduced if the following rules are observed. Like all other rules they have exceptions which will not here be taken into consideration.

(1) "Shall" and "Will."—In statements concerning simple futurity, use *shall* in the first person, and *will* in the second and third; as,

I *shall* pay this bill April first.
Remember that you *will* constantly meet subscribers ready to renew.
All subscriptions *will* receive our prompt attention.

When the statement involves a promise or agreement, or when special emphasis is to be expressed, the reverse is correct; as,

Sign and return the attached card and we *will* send you ten copies without charge.

You say you *will* not reach the salary mark, but I say you *shall*.

Bear in mind that sample copies will go as second class matter and consequently *will* not be received for several days.

This reversal of the order also applies to second persons when asking a question; as,

> "Shall you go to Palm Beach this winter?"

(2) *Affect and Effect*—While these words are somewhat alike in sound there should be no confusion concerning them if a simple test is applied when in doubt. Affect and Effect, when used as verbs, cause most confusion, and the meaning must be carefully analyzed to determine which is correct, and it is in this connection that most typists find difficulty.

Affect means to alter, to change or modify, while *effect* means to produce or bring to pass. If in doubt, the test of trying which word was intended by the dictator by substituting one of the above words is simple and conclusive; as,

> Your failure to remit promptly has affected your standing in the contest—(has changed your standing and has not produced your standing).
>
> The removal was effected without difficulty—(accomplished or finished).

(3) *Balance and Rest*—Use the word "balance" with reference to cash accounts only.

> Most of our agents receive small samples by mail, the *rest* by express.

(4) *Lie and Lay*—Perhaps no two words in the language are confused in the minds of more people than the verbs *lie* and *lay* and their principal parts. *Lie* means to recline, *lay* means to place. With these two definitions, it is a simple matter to remember that to express the idea of reclining, the verb *lie* is used as follows:

Present	*Past*	*Present Participle*	*Past Participle*
Lie	Lay	Lying	Lain

For example:

TO LIE—

> Do not allow a cylinder to *lie* unprotected on your desk.
>
> Last night, just after I *lay* (never *laid*) down, a fine plan for soliciting came to me.

I found a letter from an agent *lying* on my desk.

On account of rush of business, your letter has *lain* on my desk unanswered.

TO LAY—

Present	*Past*	*Present Participle*	*Past Participle*
Lay	Laid	Laying	Laid

Lay the book in a convenient place, as it is always a pleasure to read.

The cornerstone of that church was *laid* in 1490.

After *laying* your book of Rules aside, start with determination to succeed.

Special rules have been *laid* down in the form of laws.

BOOKS FOR TEACHING OFFICE PRACTICE

Subject	*Author*
PACE STANDARDIZED COURSE IN ENGLISH (Thirty-four complete, practicable, interesting, up-to-date lessons covering Grammar, Punctuation, Pronunciation, Word Usage and Letter Writing. Adaptable to teaching or for self-study. Based on modern teaching principles and business methods.)	HORATIO N. DRURY
BUSINESS ENGLISH Partial Contents: Business Letters. Classes of Business Letters. Suggestions Regarding Dictation. Filing. Hints for Stenographers. Letters Soliciting Trade. Needless Words. Remittances. Typewriting.	CARL C. MARSHALL
PUNCTUATION (Principles and rules, also chapters on Spelling.)	F. HORACE TEALL
THE ART OF WRITING AND SPEAKING THE ENGLISH LANGUAGE (Model Letters of all kinds. Rules of Grammar and Punctuation. Customs and Regulations of Post Office.)	SHERWIN CODY
ENGLISH FOR BUSINESS USES AND CORRESPONDENCE (Entire subject of English in its application to business forms, customs and usages.)	SHERWIN CODY

Subject *Author*

Proof-Reading and Punctuation....................Adele M. Smith

Partial Contents:

Proof-Reading. Proof Marks. Preparing Copy. Punctuation.

Making the Letter Pay..............................A. Peter Stowe

Partial Contents:

The Business Letter. The Building of a Letter. How to Write a Business Letter. The Form Letter. Distributing and Mailing. The Correspondence File. Numerical Classification of Correspondence. The File Guard. The Follow-up Filing Documents. Catalog Filing.

Letters that Land Orders............................John H. Lytle

(Showing how real sales value can be put in a letter.)

Business Correspondence and Forms.................Thos. H. Russell

(Showing how business houses are dependent on their correspondence.)

The Business Letter..................................Ion E. Dwyer

(Taking the student beyond the mechanical arrangement of the letter.)

One Hundred Lessons in Spelling..................R. G. Walters

(Classified words relating to different trades, callings, professions, commodities, sciences, arts, etc.)

Cost Accounting ....John R. Wildman

(Factory Office.)

Cost Accounting Pathfinder.....................Frank E. Goodwin

Partial Contents:

Cost Accounting Essential to Success. Practical Education Needed. Annual Inventory and Stock Taking. Economy in Modern Bookkeeping. Method of Bookkeeping Without Books.

Scientific Auditing....................................R. H. Spear

Partial Contents:

Auditing. Cost Accountant. Different Kinds of Audits. General Information. Practical Auditing. Systematizer. Trial Balance. Value of Audit.

Practical Auditing ....George B. Renn

Partial Contents:

Analysis of Accounts. Auditor's Working Sheet. Practical Auditing.

Subject	*Author*
FILING SYSTEMS (Containing information as to chief characteristics of modern methods and their application.)	EDWARD A. COPE
THE CARD SYSTEM AT THE OFFICE (Showing the accessible arrangement of information by systematic indexing.)	J. KAISER
PRIMER OF SCIENTIFIC MANAGEMENT (Dealing with the problem of maximum prosperity for the employer coupled with maximum prosperity for each employe.)	FRANK B. GILBRETH
OFFICE ORGANIZATION AND MANAGEMENT (A description of office organization and management under English methods.)	LAWRENCE R. DICKSEE AND H. E. BLAIN

COLLATERAL READING FOR OFFICE PRACTICE (PUPILS)

Subject	*Author*
CORRECT ENGLISH—HOW TO USE IT (The purpose is to secure better results in English in all classes of Schools; containing shorter exercises than usually given in text-books.)	JOSEPHINE T. BAKER
THE CORRECT WORD—HOW TO USE IT (Comprehensive work of quick reference for the home, the office, and the school.)	JOSEPHINE T. BAKER
HOW I CAN INCREASE MY VOCABULARY (This book is liberally sprinkled with quotations from the best authors and shows their application and relation to the subject-matter; adaptable for self-study.)	JOSEPHINE T. BAKER
BUSINESS CORRESPONDENCE (Intended to assist the commercial student who has just entered the business world. Useful also as a reference book.)	FOREST CRISSEY
BUSINESS CORRESPONDENCE AND MANUAL OF DICTATION, (Containing copies of actual business correspondence, collected from representative houses.)	WILLIAM H. BROWN
IN THE FRONT OFFICE (Concerning things that affect the bank balance; containing schemes for making the office more productive at less cost.)	"ROUGH NOTES CO."
HOW TO BE A PRIVATE SECRETARY (Valuable to Stenographers, Bookkeepers, Correspondents, Filing Clerks, Office Boys, etc.)	SHERWIN CODY

Subject *Author*

PARCEL POST ....EDITH M. PHELPS

(Contains various arguments for and against the Parcel Post; also information regarding the present status of the Parcel Post in this and other countries.)

BUSINESS ADMINISTRATION ....EDWARD D. JONES

(Modern administration of manufacturing and operating companies, treated as a profession which follows scientific principles.)

HOW TO SYSTEMATIZE A DAY'S WORK...........A. W. SHAW COMPANY

(Presentation of practical methods.)

MENTAL EFFICIENCY ....ARNOLD BENNETT

(Treating efficiency as a product of concentration which in turn is the product of will power.)

PRACTICAL SYNONYMS ....JOHN H. BECHTEL

(Designed to give skill in the choice and right use of words and to afford variety and facility of expression.)

THE EFFICIENT MAN..................................THOS. D. WEST

(This work shows where the present inefficiency of Man is carrying the masses to extreme cost in production, in building and in living.)

HOW TO GET YOUR PAY RAISED.................NATHANIAL C. FOWLER

(In which sixty-eight men who have made good, who have risen from the ranks to high positions and competence, tell how they have won success.)

THE YOUNG MAN IN BUSINESS...........................EDWARD BOK

(Covering the subjects of development, advancement, luck, salary, etc. A Book which has influenced a wide audience of young men for good.)

HYGIENE FOR THE WORKER....................TOLMAN AND GUTHRIE

(A practical, readable little book well adapted to employés in offices, shops and factories.)

THE ART OF HANDLING MEN.........................JAS. H. COLLINS

(Various phases of management and its principles analyzed. Everyday human light on salesmanship.)

COLLATERAL READING FOR TEACHERS OF OFFICE PRACTICE

Subject *Author*

YOUR EVERY-DAY VOCABULARY..................JOSEPHINE T. BAKER

(This book takes up difficult and important words, describes them, gives the correct pronunciation and uses them in quotations from standard authors.)

Subject	*Author*
LETTERS THAT MAKE GOOD (Consisting of two parts; the first, containing a discussion of business letter-writing, the second, presenting a large number of illustrative letters.)	POOL AND BUZZELL
SCIENTIFIC BUSINESS LETTER-WRITING (Precepts are the result of practical experience. Prepared by a Correspondent with ten years' experience in building up business by mail.)	L. E. LUDWIG
THE AMERICAN OFFICE (The whole subject of office organization and management is treated from the practical business man's point of view.)	J. WM. SCHULZE
OFFICE MANAGEMENT (Presenting the problems of organization, hiring, handling and paying office help, desk methods, etc.)	A. W. SHAW COMPANY
ACCOUNTING AND OFFICE METHODS (Laying out an accounting system and containing methods of handling correspondence and office work.)	A. W. SHAW COMPANY
COSTS AND STATISTICS (Emphasizing the high value of correct cost reports and showing the significant information which cost figures convey.)	A. W. SHAW COMPANY
PRINCIPLES OF SCIENTIFIC MANAGEMENT (Outlining the fundamentals of Scientific Management and the development of principles from these fundamentals.)	FREDERICK W. TAYLOR
BUILDING YOUR BUSINESS BY MAIL (A compilation of successful advertising campaigns, representing every line of business.)	WM. G. CLIFFORD
PRINCIPLES OF THE MAIL ORDER BUSINESS (Sixth edition, containing full information on mail order advertising.)	ARTHUR E. SWEET
ECONOMICS OF BUSINESS (A clear presentation of modern principles and methods. Valuable for reference.)	NORRIS A. BRISCO
ELEMENTS OF STATISTICS	ARTHUR L. BOWLEY
INTRODUCTION TO STATISTICS (College text-books treating the subject in a scientific manner.)	GEORGE YULE
ORGANIZATION AND MANAGEMENT (Valuable to the man just formulating his ideas of business requirements.)	LEE GALLOWAY

Subject *Author*

INCREASING HUMAN EFFICIENCY IN BUSINESS........WALTER D. SCOTT

(A chart and compass for the young man who seeks real and genuine success, explaining the various factors which affect individual efficiency.)

HOW TO LIVE ON 24 HOURS A DAY.....................ARNOLD BENNETT

(A series of personal essays discussing the problem of attaining happiness through living the intenser life.)

BUSINESS ORGANIZATION AND COMBINATION.........LEWIS H. HANEY

(Outlining elements and principles of business organization.)

MOTION STUDY ....FRANK B. GILBRETH

(A practical book in which the author presents material which attempts to show the necessity for Motion Study and the savings that are possible by the application of its underlying principles.)

FATIGUE AND INEFFICIENCY........................JOSEPHINE GOLDMARK

(Presenting specific studies of physical overstrain in industry, fatigue and industrial accidents, fatigue and output.)

TWELVE PRINCIPLES OF EFFICIENCY................HARRINGTON EMERSON

(These twelve principles are so defined and so true that they may be used as gauges. Any industry or establishment may be tested thereby and its efficiency measured.)

THE JOB, THE MAN, THE BOSS...........KATHERINE M. H. BLACKFORD

(This book is a scientific discussion of the ways of determining personal characteristics and mental and physical fitness of any man for any job.)

BUSINESS PSYCHOLOGY ....T. SHARPER KNOWLSON

(A brief but comprehensive work on the operation and cultivation of the mind in and for business.)

PSYCHOLOGY IN DAILY LIFE......................CARL E. SEASHORE

(This work is free from technical terms and presents a fresh and original arrangement of the material, characteristic of modern interest in the laws of the mind.)

EFFICIENCY ....HARRINGTON EMERSON

(A discussion of the principles involved in efficiency, an excellent view of existing conditions and what may be accomplished by greater efficiency of method.)

SCIENCE AND PRACTICE OF MANAGEMENT........A. HAMILTON CHURCH

(Treating the subject from the practical point of view, giving the fundamentals of the science of management.)

Subject	*Author*
THE NEW INDUSTRIAL DAY (A discussion of pressing problems by a manufacturer of much experience in various phases of scientific industrial development.)	WM. C. REDFIELD
EXPENSE BURDEN (An exposition of principles to be studied carefully by every student of cost accounting; contains information which increased competition makes indispensable.)	A. HAMILTON CHURCH
CORRECT ENGLISH CALENDAR DRILL-BOOK (Useful for the purpose of self-education.)	JOSEPHINE T. BAKER
THE METHOD OF THE RECITATION (Prepared for use of Public School Teachers. Principles are applicable to teaching in general.)	CHAS. A. MCMURRY

THE CHAIRMAN: I am going to call first on Mr. Mehren of the *Engineering Record* to say something on this subject.

MR. E. J. MEHREN of the *Engineering Record:* Mr. Chairman, ladies and gentlemen, the first thought that occurs to me is that the report of this committee runs diametrically opposite to the views of the organizing convention of this Association. At that Convention, when the opinion was expressed that the Association should not draw up syllabi, and that it should not attempt to dictate what should be taught and how it should be taught, the sentiment was most heartily applauded. The thought with the member companies seemed to be that they would not want to be dictated to by any association, nor would they wish to have their courses laid out for them. At that time it seemed unnecessary to some of the corporations. That period, apparently, has passed because now the demand is registered in the office of the secretary for some definite details as to the method of procedure in connection with corporation instruction.

It was in response to that changed idea that the Executive Committee in preparing this year's work ran counter to the sentiment that was apparent in the organization convention. I mention this because it seems a marked step in the rather brief history of the organization. If, at the start the idea of the necessity of a school had to be "sold" to corporations, and if now the sentiment seems to be totally and diametrically different, it would seem to be rather our function to endeavor to secure the widest publicity possible for details as to courses. In other words, if the conviction is strong now that there is need for corporation instruction of the employe, if we no longer have to sell corporations that idea, then the next step is to show how this great work is to be done.

The report of this committee attempts to tell in one sphere how that work may be done. And if the corporations are convinced of the need of the work, then it seems to be the function of the Association now to spread the knowledge of the methods and how this instruction is to be given. This report in my judgment should help to that end. When the committee first met it was proposed to draw up certain syllabi of courses in two or three lines that might be included under the head of office work. After considerable discussion it was agreed that a syllabus on any one of the subjects proposed, in order to be of value, would have to be in very great detail. Rather than to attempt merely to catalogue the subjects that might be taught, sub-classified and sub-headed into its various elements, it was thought best to draw up the manuals shown in the three divisions in this report. While termed syllabi they are in reality manuals of instruction in those particular subjects.

THE CHAIRMAN: Mr. R. H. Puffer of the Larkin Company will now address you.

MR. R. H. PUFFER (Larkin Company): Mr. Chairman, I believe we will all admit that the committee on office schools has covered the ground pretty thoroughly on general office lines. Probably most of us will find it necessary to change parts of the report in order to make the outline agree with our particular line of work.

In the Correspondence Manual, for instance, there is no space devoted to the operation of the phonograph and no guides to dictation are given. We give our people a lesson called "Guides to Dictation" before they begin to dictate to the machine. This lesson covers such points as the following:

1. When dictating, always speak directly into the speaking tube.

2. Begin your sentences slowly.

3. Enunciate clearly, bring out the letters R, S and T distinctly.

4. Never use the recorder as a reproducer or the transcriber will have difficulty in getting the dictation.

On page 9 there is a section concerning the follow-up letter, that is rules for writing follow-up letters when the original letter is quoted in the follow-up. But no mention is made of the important follow-up letter in which the original letter is not quoted. It seems to me that the more important second follow-up letter is the letter that is rewritten and the material presented in a different way so that we get an answer from the customer.

I want to take the time which is alloted to me to discuss two or three Corporation School problems which a report of this kind does not include.

GENERAL WORK OF THE SCHOOL

I believe that we are keenly interested in office school work because here there is an opportunity to help the beginner and the development of the beginner is a means of improving the efficiency of the business. We are not dealing wholly with figures, systematising and routine. We are dealing with people.

We are the builders of their foundation for specific office work. While teaching them the fundamental points of the office system we have the opportunity to inspire them with ambition, to instil enthusiasm and to teach the principles of character which will make them better men and women for the future.

Emerson says, "The truest test of civilization is not the census, not the size of the cities, not the crops, but the kind of a man the country turns out."

The truest test of an office school is not the accuracy of the files, not the speed with which the work is done, but the state of development its finished pupils have reached. We must not ignore this thought because it is fundamental. If the new people who come to our office schools are the right material, and it is our job to see that they are, if they are properly treated and carefully taught it will follow that the methods and ethics of a business will stand the test of efficiency experts and congressional investigations.

We have a great opportunity to play an important part in the moulding of the character of the young people who are new in the business world. Their habits are not formed and their principles of life are in an embryonic state of development.

The average boy's idea of business is that the business man goes to his office in a limousine and after reaching his desk places his feet thereupon, lights his cigar, opens and reads his mail, attends a conference, lunches at the club, devotes the afternoon to golf and banquets in the evening.

We must teach the boy the fine ideals of modern business, inspire him with a wholesome respect for honest work and show him that the only way to succeed is to take his coat off and dig. He must know the ethics of a square deal and learn to love and serve his fellow man.

Therefore, I say that in our office school work we must not lose sight of the fact that our greatest success lies in the amount of real good we are able to do for the people with whom we come in contact.

THE SELECTION OF THE TEACHER

The first great problem in organizing a school is the selection of the teacher. It is generally conceded that the essential factor necessary for the success of any school, whether public or corporation, is the teacher.

A good teacher has the ability to impart knowledge and to inspire his pupils. He must be courteous, sympathetic, enthusiastic, practical and should possess strength of character and an engaging personality.

Unless you are extremely fortunate you all had years when you were going to school that you did not learn as much as you should. These might be termed the lean years of your educational development. You had the same books, you were in the same school room, and your home conditions were not changed. The reason was that you had a different teacher.

Bishop Spaulding says, "What the soul is to the body, what the mind is to man, so is the teacher to the school."

One educator puts it this way, "The teacher is the school."

We cannot afford to waste much time experimenting with poor material, so one of the greatest problems that confronts us in our corporation school work is to know how to get the right kind of teachers.

There are two methods open to us.

1. To employ people who are trained teachers and instruct them in the detail of the office routine.

2. To employ an experienced teacher to take charge of the school and instruct carefully selected clerks in the methods of teaching.

These clerks of course know the routine thoroughly and should have the right kind of personality and a good education.

Larkin Company has adopted the second method which is working out very well.

THE ARRANGING OF THE ROUTINE IN LESSONS

After the teachers have been selected and instructed in the method of teaching it is necessary to arrange the routine so that it will be in teachable shape. We have found it a good plan to put the work in lesson form, each lesson being a regular graded step. It is a great help to have the work you are teaching printed in this manner so as to give the pupils a clear explanation of the routine.

For example, in teaching clerks for our sales department, which is a detail department where the customers' files, accounts and records of shipment are maintained, we begin by teaching them about the files from a book of lessons on this subject. We take up the record card first as this file is really the index to the others.

The lesson is arranged so as to cover the following points:

1. An explanation of the use and importance of the record card file.
2. Kinds of cards and the use of each kind.
3. How to inspect the cards before they are filed.
4. How to file the record cards.
5. How to revise record cards.

We take up each file in this manner, giving the why first and then explaining the how. The headings are arranged so that the subjects will be learned in the order in which the work is to be done.

After a class is started we divide the time into three periods:

1. A period for study.
2. A period for class instruction.
3. A period for practical work.

KIND OF PUPILS

The third problem that confronts us is to find out what kind of pupils we want to teach in order to get the best results. The public schools have no choice in the matter of pupils, we have, and so great care should be taken before a new clerk is hired. If, however, the employment department makes a mistake and gets the wrong type of clerk, it is the work of the school to weed out poor material before it has an opportunity to become established as a part of the organization.

A business is obligated to the people it employs and if it can aid in shaping their lives for good without destroying their individuality it will have gone far towards justifying its existence in the community.

All office schools deal with people untrained in the business world and I believe experience the same difficulties with these people. We find that the clerks we get have not had as much practical experience as we should like, and I believe we need a course of study that will make the boy or girl, who will only get one, two or three years of high school, more efficient.

I do not know whether this course ought to take one year or two years, or when in the school curriculum it ought to come to be the most practical for the boys or girls who cannot continue their education. But I do know, that the people who have to work need more reading, writing, arithmetic and spelling.

We do not need arithmetic that scans a lot of subjects useless to the average person as weeks spent on partial payments and compound interest, but we do need arithmetic that spends weeks upon addition, subtraction, multiplication, division, fractions, decimals and percentage taught in a practical way. Drill, drill, drill ought to be the slogan of a teacher of this class, and a course of this kind would not only teach the pupils how to add rapidly and accurately, but it would develop keener, clearer minds.

Of course, I understand that it is not the work of the public schools to drill the child so that he will become only a rapid adder, because——

A VOICE: Why not?

MR. PUFFER: Skill in arithmetic is like skill in playing a piano. It depends upon the amount of practising you do. The school man says, "Practice arrests intellectual growth at the stage of the acquisition of a particular habit, and the public schools cannot afford to make their pupils proficient in any subject that is to be used exclusively for a particular art. Their function is general." However, I believe that a great deal can be gained by more practical teaching of the fundamentals of arithmetic, reading, spelling, writing and good English.

THE STANDARD CLERK

There has been some discussion concerning the standardization of office operations. As every office has its own system developed to accomplish a particular line of work I do not see that as yet it is a practical proposition to attempt to standardize office operations, or make a comparison between one office and another, each doing entirely different work and selecting a different type of clerk for a job peculiar to that office. The big proposition as I see it is to determine what preparation the public schools should give our girls and boys so that they could go to any office, and be successful if pronounced O. K. by the public school teachers.

I believe that progress could be made along this line by a careful study in each office of the essential qualifications of the successful clerks. Such data could be submitted to a committee of office school men, and the standard qualifications determined. The results found by the committee, however, should be turned over to the public school men who would be able to make out a course of study which would develop a standard clerk. (Applause.)

THE CHAIRMAN: Two or three suggestions on the committee's outline have been made by Mr. Puffer. I should like to make this explanation:.

The committee does not claim that the report is not open for discussion or argument. There is a great deal in this outline that would not apply to every business. Mr. Puffer referred definitely to the follow-up letter. This was drawn from the manual of a company which does not have follow-up letters requiring revision of the original letter. The follow-ups in this particular company are such that they only have to embody the original letter.

The same thing might be said of a great many rules, definitions and illustrations that appear throughout the manual. There is plenty that could be improved, there are a great many points on which there could be much argument. The outline here is intended as something tangible in the way of a guide for concerns who are making up outlines for their own businesses.

Mr. Hopf will continue the discussion.

Mr. Harry A. Hopf (Phoenix Mutual Life Insurance Company): Mr. Chairman, ladies and gentlemen, while listening to the preceding discussions concerning office work schools, I have been impressed with the belief that the establishment of such schools would go a long way toward combating the tendency which has existed up to the present time of according insufficient recognition to the office as an important part of the business organization.

Instead of regarding office work as a major function, entitled to share equally in the attention given to other major functions in the organization, one is apt to find, upon making a practical study of the average business office, that its function is not always clearly understood, that there does not exist a sharp line of demarcation between the office and other divisions of the organization, and that, in consequence, there is a lack of uniformity in decisions made by different authorities on the same subject matter and an absence of definite standards of performance throughout the organization.

Perhaps the situation may be best understood by considering the various steps which attend the introduction of the office employe into the average business organization. In the first place, in the vast majority of cases, the employe comes in contact with a certain line of business, through chance rather than by design. He answers an advertisement, or, through the influence of a friend, is brought in contact with an opening in the organization. Thus it happens that in the majority of cases the employe has no knowledge at all of the requirements in the special line of business in question and, consequently, he must be classified as raw material.

The organization itself, instead of recognizing this fact and taking steps to engage employes who are familiar with the technique of its work, applies some more or less vague standards of selection and of entrance requirements. These are successfully passed, and the employe enters the organization.

He is, thereupon, placed at a desk and is instructed to do the work which is usually referred to that desk. Ordinarily he is not told what the function of that particular desk is, nor is he given a comprehensive view of the work done in the section of the organization in which he finds himself. If he is specially willing, he will probably have work referred to him which, before his entrance into the organization, was done by a fellow clerk. If he is somewhat backward and requires more than the usual amount of supervision, some of the work formerly done at his desk is assigned to others.

This procedure, so common in the average business office, creates a situation which the office work school, it seems to me, is specially designed to remedy. It is being recognized more and more that scientific principles underlie even simple lines of office work, and that the problem is not which of two views concerning the best method of doing office work should prevail, but it is rather to discover the only right way of doing that particular piece of office work and then to standardize that way, maintain it as a permanent part of the procedure, and to allow no deviations from it until a better way has been permanently adopted.

It must be admitted in this connection that the average office employe cares very little about systematic instruction, and that he does not, as a rule, recognize the advantages which will accrue to him therefrom, nor the fact that by deveolping his knowledge of the work he is engaged in, as well as the work immediately surrounding him, he will, in the long run, make himself more valuable to the organization employing him. It therefore becomes a practical problem to arouse the interest of the office employe and to demonstrate to him that by availing himself of the means of instruction afforded he may find the office work school one of the surest ways to obtain promotion.

It is hardly necessary to mention that the principle of rewarding merit wherever it is shown to exist is a necessary part of any scheme of developing employe efficiency. The office work school undoubtedly will do much to make the average office employe more efficient, not alone through properly instructing him, but also in developing all those qualities in him which make for success.

It is not so easy to determine the subject matter to be taught in the office work school. In the ordinary commercial organization, where the nature of the business is not intricate and the office operations are comparatively simple, it may be a fairly easy problem to define the scope and subject matter of instruction and to adopt manuals covering the common forms of work, such as correspondence, typewriting, stenography, indexing and filing, duplicating, etc. But in technical lines of business as, for instance, life insurance, the problem is rather a complex one. In life insurance we are obliged to deal with actuarial science, with medicine, with law, with financing and with a general knowledge of business at large. The article we deal in is neither like a barrel of sugar, nor a yard of cloth, nor wearing apparel,—it is intangible and the market for it has to be created each time a sale is attempted. It is well known that in our line of business the customer must practically always be persuaded—quite forcibly at times—to see the necessity of the article we are selling.

By reason of the fact that the life insurance product is intangible a good deal of stress should be laid on the office and selling organization which constitute the entire scope of our business. And yet, it must be confessed that in many apparently successful companies either the one or the other has been sadly neglected in the past.

Manuals of instruction for use in the life insurance office, because of the complexity of the subjects dealt with, must above all be thorough and so also must be the work of instruction based upon them. Even a complete professional course in actuarial science, law or medicine does not necessarily qualify an individual to render good service unless to such qualifications years of special experience are added.

Nevertheless, the work of the life insurance office will be materially furthered by training clerks in the various departments to the point of possessing at least a limited knowledge of the particular science applicable to their work, so that department heads and technical experts may be relieved of a host of matters of minor importance constituting quite often a serious burden.

To the average clerk in the life insurance office the systematic means of instruction afforded by the office work school course represents the chief means of qualifying himself for work of greater responsibility, and, that this is recognized by the clerks themselves, appeared, as far as the company I represent is concerned, in a suggestion contest which was recently held. Out of nearly 700 suggestions received during the course of the contest, a large number referred to educational work and the suggestion winning the principal prize of $20.00 recommended the establishment of an office work school.

Just a word as to the scope of the report rendered by the committee.

I have been very much interested in going through this report, and the quality of the material it contains is so excellent that I have regretted that circumstances compelled the committee to limit itself to the three or four subjects treated.

I appreciate, perhaps as well as anyone in the audience, the enormous amount of work entailed by the production of a report such as the committee has rendered. I should like to have seen reference to other matters, such as, a knowledge of the elements of success; also information concerning personal hygiene, and a statement of the elementary principles of business organization and procedure. It seems to me that the average employe will more thoroughly understand the specific subjects taught in the manual if, in addition to it, he is shown the basis on which these subjects rest and is, in a measure, given a background of principles which will illuminate his study of the subjects in question.

I believe the committee is deserving of much commendation for the splendid work it has done, and in conclusion, I should like to express the hope that this excellent beginning will be enlarged upon by next year's committee. Undoubtedly, material of the kind contained in the report offers the best proof of the usefulness of the work done by this Association. (Applause.)

THE CHAIRMAN: Mr. Hopf's wish that the report of the committee might cover more subjects is also mine, but since we had only a certain amount of time in which to get our material together we could cover only the subjects that have been listed.

I hope that the Committee for next year will continue the work along the same line and present something more definite and nearer to what is wanted. Then after several years The National Association of Corporation Schools will have a practically complete outline on all office work subjects. It seems to me that if it could be done it would be a real accomplishment, and I see no reason why it can not be.

Mr. Adlerblum, of the Metropolitan Life, will address you.

MR. I. S. ADLERBLUM (Metropolitan Life Insurance Company): Mr. Chairman, Ladies and Gentlemen, it is important that we orient ourselves properly in this discussion of office work schools. In the first place, we are advocating the establishment of corporation office schools. In the second place, we are considering ways and means of conducting them. We should, therefore, bear in mind the following questions:

1. What want will the office school fill?

2. How has this want been met hitherto without the aid of a school?

3. What improvement will the establishment of an office work school effect in present methods?

We must not forget that after all, our corporations do have well-equipped offices, and that the larger part of our office help has the training of years of experience behind it. We must not approach this subject as though we were going to create our offices *de novo,* introducing an entirely new office force and revolutionizing everything. The office force, as a rule, is pretty well acquainted with its work and each employe knows his function in the organization. If, therefore, there should be no new employes taken on in our offices there would be very little need of office schools because each employe who is already there has well mastered his duties. But as a matter of fact, in the larger offices the personnel is constantly changing. There are always some dropping out and new ones coming in. Here then is our first point of contact with the subject under discussion. The new employe must be taught the routine of the office. He should be given an idea of the organization, and be infused with the general spirit of the office. It is here that an office school will be found of great value, in relieving the executive or the section head of the necessity of devoting so much of his time to breaking in the new employe. Here, then, is a want which the school will fill. It will solve, primarily, our problems arising in connection with newly-appointed help. Secondly, it will also be of value, of course, as a means of standardizing the work of the existing force.

✓ Without an office training school the work of introducing a new employe to his duties is costly and tedious. The section head has to spend a great deal of time with the new employe in going over the work with him. And he necessarily does it rather imperfectly, because he cannot bear in mind at any one time all the details which the new worker must be taught; nor can the employe comprehend at one stroke and remember everything that is put into his head. Pressure of time and other duties of the section head cause him to let the new employe fall back on his own resources before he is fully equipped and errors and defects will constantly creep into his work as a result. On the other hand systematic instruction by means of an office school is bound to yield satisfactory results both to the employes and the employer.

Now we come to the question as to how an office school should be conducted. To begin with, a well written manual is necessary to serve as a text book. In this connection the committee's report is an excellent piece of work and should prove an effective guide to those who contemplate drawing up manuals for their particular offices. There is enough material in the report to enable the office manager to adapt it to his specific needs. Now, given such a text book, the problem of conducting the office school is not so difficult. Where there are many new employes taken on in the course of a year, regular class-room instruction might be given. A regularly appointed instructor might guide them through the study of the manual in the same manner as the school pupils are guided in the use and study of text books. On the other hand, in offices where the new employes are few and far between, and where, consequently, class-room instruction is inexpedient, the manager will find that his task of instructing them is very much lighter if he does it by means of a manual. It will require much less time and give better results. We may therefore say that a good manual will help considerably to solve the office work problem, and we are under obligation to the committee for having started us aright in this direction.

Now I want to leave a suggestion with you as to how the office manual can be employed to best advantage. The problem to which I am directing your attention is, how can we make sure that the employe has mastered the contents? And my answer is, require written tests from them. Draw up a series of review questions and have the employes write out the answers. This examination will tell whether they have studied and understood the manual. If the papers are satisfactory, you will know that your employes have gotten a good start. If some answers are not up to the mark, then you will know where your employes experience difficulties, and you will be in a better position to bridge them across.

In the minute or two remaining I want to offer some suggestions that might well find a place in an office manual, in addition to the material which the committee has presented.

1. In the manual for correspondence, attention should be directed to a distinction that might be made between correspondence with your field force and correspondence with the public. With your own representative you can afford to be a good deal more terse and concise than with the outside public. I do not mean that words like "Dear Sir" and "Yours very truly" should be omitted from such correspondence. Where you do not meet your salesmen personally, and carry on your business with them through correspondence, it is well to greet them courteously in your letters. But you can express the message to them in much briefer form than to an outsider who is not entirely familiar with your manner and methods. In our office we have found it an excellent plan to give the subject matter of the letter in a heading, introducing it by the words "in re." This heading is of value also as a guide in filing.

2. As a previous speaker has pointed out, the manual for correspondence must really draw on many sources. The correspondent, for example, should have an idea of the plan and scope of various kinds of letters. He should know how to write an opening or approach letter; how to write a follow-up letter and at what intervals; and he must be able also to write a good closing or clinching letter to consummate a transaction.

3. The report might well give a place to what may be called *good will* letters to clients of the company.

4. In the manual on filing I would include instructions as to indexing and as to the system of clearing the files of deadwood. Some system should be devised in every office whereby material of temporary value is removed from the files, as soon as it is found to be no longer needed. It is important that the files should be cleared systematically every week rather than by instituting a clean-up day at haphazard intervals.

5. Another topic that I would like to see included in the report is the subject of mailing lists. It is extremely important that correspondents and stenographers should be charged with the duty of keeping these always up to date.

It would be a good idea, if any of you here do adapt the report of the committee to the specific needs of your offices in the course of this year, if you would send a copy of your manual to the committee, that they might have the benefit of your suggestions and a larger and more comprehensive basis to work on.

In conclusion, I want to second heartily the suggestion that has been made here on the subject of health and hygiene. This is something that should be emphasized in every manual and in every branch of the relations of a corporation to its employes. We cannot stress too much the gospel of good health as a prerequisite to efficient work. The company which I have the honor to represent has adopted very far-reaching measures in this regard. The Metropolitan Life Insurance Company has a well-equipped medical dispensary at the office which is well patronized by the thousands of its home office employes. Then also our company has inaugurated a system of compulsory annual medical examinations for each employe. These examinations are for the purpose of detecting and stopping in their incipient stages serious ailments which, unless caught in time, would progress to a harmful stage. The Metropolitan also maintains a sanatorium on Mt. McGregor where tubercular and rundown employes are cared for under most congenial conditions. I would, therefore, suggest that the motto of good health should be conspicuously written in every office manual. It is the one universal requirement. (Applause.)

THE CHAIRMAN: The suggestions and criticisms already received on this report are, I think, exactly the kind of thing that is wanted. Being chairman of the committee that made up the report I can say that they are welcomed because they will certainly help the committee that is going ahead with the work next year. It would be well if every delegate could make a concrete criticism on the manner of handling this report so that the new committee might have it to work on next year. Then we would have something which would cover as nearly as possible the ideas of all the member companies.

MR. E. C. WOLF (The Curtis Publishing Company): I am naturally a pacificist, but this morning I am going to be a little belligerent. In the first place I must disagree with Mr. Adlerblum that the office end of the organization is pretty well developed. I say that outside of the insurance companies it is a good deal further behind than any other part of the organization. He is speaking from the point of view of an insurance man. In our big corporations it is the least developed of any part of the organization. There are but a few concerns that have developed their office work.

For two years this Office Work School Committee has been engaged in the solemn duty of presenting concrete but conservative suggestions to encourage and assist corporations in studying out and establishing some form of definite training to increase the efficiency of the office workers. I can safely say, without fear of contradiction, that no one realizes more than the members of this committee the importance and the great economy in such a step.

When we presented our pleas, we had no quarrel with the development of schools; we believe in those schools as heartily as you do. What I want to ask you, and what really should concern us here more than anything else, is what have our efforts availed us? With some humiliation we must confess to considerable failure. But in this I ask are we wholly to blame? What have you done to help the cause along? Our records show that there are very few office work schools and when I say office work schools, I do not mean regular school organizations, I mean some definite form of training for office workers, whether a school or a system that has been adopted in the office organization itself. Very few such office work schools have been established since the formation of The National Association of Corporation Schools.

I take it, that it is not concrete suggestions that you want, but it is a general stirring. Your presence here is evidence that you believe in the principle of educating your employes. What you need is a little punch and ginger on general questions of efficiency.

There are two phases to office efficiency: Organization and training. If anything makes me tired it is to hear a manufacturer boast about the efficiency of his organization, and then walk through his plant and find the office scattered all over the place. Just as many units as whims of superintendents and managers and foremen. You do not find his forge shop scattered; you do not find the power house scattered; you do not find the selling organization scattered, but the poor office! You know it, you have all seen it, and in these efficiency plants too, if you please. (Laughter.) I am not speaking about insurance companies, because the office work in an insurance company is almost ninety per cent. of the entire activity.

If the average American manufacturer knew his total clerical expense as he knows a lot of other things he would not simply put that expense in the overhead as a necessary evil, but he would take some notice of it. Ninety per cent. of them do not know what their total clerical expense is, and it is much larger than it should be. If you do not know what it is, find out when you go home and see if it does not stagger you. There is no reason, ladies and gentlemen, why all the clerical work should not be organized and centralized just as well and just as highly and effectively as any other part of the organization. This is not theory, it is being done and done very effectively and successfully in a few places.

Now just a word as to the training: Even if the average clerk has been in high school is that any reason why we should let him do for himself what we all recognize is very largely the employer's responsibility? I imagine your experience has been very largely the same as mine, that the average clerk is not an exceptionally brilliant person. Now then, what does that mean? The General Electric Company, The Westinghouse Electric Company, The Western Electric Company and some other large corporations of that kind do much for their college graduates. Why should not the clerk get the same square deal as that? I have not heard anybody raise any question.

Mr. Howlett: They do.

Mr. Wolf: The average clerk?

Mr. Howlett: At The General Electric Company they do.

Mr. Wolf: I am speaking of the situation over the entire country. If it is good for college graduates why is it not good for high school students?

Mr. A. W. Earle: This is the trouble with high school students: we have to teach them addition, subtraction, multiplication and division.

Mr. Wolf: That is difficult with the ordinary high school student; that is the trouble we have to contend with.

Mr. Earle: I have been teaching the grammar school subjects for two years, the A, B, C's that they should have learned in school long ago.

Mr. Wolf: What number is deficient in these studies?

Mr. Earle: Well, we have found that there were a great many and in our own plant five years ago we found it necessary to establish a school for apprentices and mechanics. We believe it to be the best school of its kind anywhere. If you look at the examination that we give them you will find that 65 per cent. fail. The judgment of others in different companies who have studied this question shows that it all runs the same way. Four or five other gentlemen with whom I have talked here, claim that seventy per cent. fail in the examinations at their companies.

When the young men come to my office I give them a good fair trial, and I find that forty per cent. do not know decimals and fractions.

Now if this Association is going to do anything, let it be constructive. Do not let us have merely discussion here; let us get down to concrete cases and let every man here go back to his Board of Directors—they are all politicians—and with the power that there is behind this organization take up this question with the Boards of Education and Superintendents of Educations. If this is done there will be a change.

MR. WOLF: I will admit you have the right idea.

MR. EARLE: Let us do something. Let us not pass over this opportunity to do the first thing that has been done in this Convention.

We had a round table on public education and the recommendations of the round table to the Executive Committee were that the subject of the three R's be taken up definitely by this Association with the Boards of Education in the public schools. That is one thing we have done here, let us do it again. (Applause.)

MR. WOLF: Those of you who remember the report of the office work school committee last year will probably recall that our whole report was based along that very line. We asked the members of the Association a series of questions about the public schools and their product in their particular town. This questionaire had perhaps ten or twelve inquiries along that line, and the last one was "would you be willing to co-operate with your local public school system if the local public school system is willing to co-operate with you?" In addition to that we sent out a questionaire to the public school systems of the same towns and asked them point blank, if they would co-operate with the local manufacturers, and if not why not. They came back and said, "Yes, we would be glad to co-operate." So I think that the responsibility is pretty largely ours.

Mr. Earle: That very thing I have done. I have been to the boards. I am Chairman of the Chamber of Commerce's committee on publication in my own town. They came to us and wanted additional facilities for their commercial high school and we gave them what attention we could, and told them exactly what I have told you here. We had a second meeting, and the superintendent of the public education board came over to us and said, "Gentlemen, will you appoint a committee to work with us?" We did. We worked two years. We went through every school. They never have done one solitary thing. They said, "Yes, we will help you."

Mr. Wolf: On the other hand I think we had a very interesting experience in Philadelphia.

Mr. Earle: You have laid the proposition before us, and what I want is that these men should go home and talk to their own people.

The Chairman: You say you have been trying very hard to get your local people to do something?

Mr. Earle: Yes.

The Chairman: In the meantime, knowing you were not making very much progress, what have you been doing with your own people and in your own plant?

Mr. Earle: We are developing our own schools.

The Chairman: You have an office school?

Mr. Earle: We have had an apprentice school for five years, and we are starting an office school. That is why I am here, for light on the subject.

The Chairman: On that point I wanted to say one thing here that applies to all of us. As delegates we have come here for two reasons:

First, to give and receive information on any subjects on which any of us may be familiar. If one or two delegates to this Convention can go home believing that they are going to use their efforts to get something started for their office people, I would think that the success of the Convention had been established, and that we had done something. And I only want to supplement that by saying that at the National Cloak and Suit Company, we have spent a great deal of time, a great deal of money, on the problem of training office people; and everything that we have, as to system, methods, and plans of training office workers, is at the disposal of any member of this Association, and I hope you will take advantage of this offer. Let us prove to you that we are on the right track. Let us help you to profit by our failures and by our successes in getting down to bed rock on the training of office people. (Applause.)

Dr. Snedden, may I ask you to address a few words to the members of this Association on the general problem of training?

DR. DAVID SNEDDEN: I will try to, but I don't know that I have anything to say. Now or later as you please.

THE CHAIRMAN: I think now would be desirable, if you feel that you can.

DR. DAVID SNEDDEN: Suggestions have been made here, already a number of times, that the public schools are not doing quite their share of the work that should be done. That suggestion it seems to me is a very valuable one. And there are two things to be done about it: One is, of course, to bring greater pressure to bear upon the public school authorities, school boards and others, to influence them to do more of the things that there are to be done; and the other is to make rather specific and concrete suggestions.

We can not lose sight of what the public school is—it has to do with all classes of people. Out of the eighth grade of the elementary school for example, we know some of the pupils are going into business lines, others into trade lines, others into farming, and others into miscellaneous occupations. Now a public school program, of course, has to be based upon the needs of the rich as well as of the poor man, that is all kinds of children can come to it and get their basic materials for an education. The program followed by a public school must be in the line of general knowledge. I think I yield to no one in my readiness to criticize what the public school is doing, but the situation is not helped by the demands that are made by people who refer to a particular claim or a particular line of appeal, unless they are making their claim upon schools that are alleged to be dealing with them.

I believe myself that when you are employing people who are coming from business schools, commercial schools, and commercial high schools, you have a definite claim for results. But when we think of people only within the elemenary school the proposition then of a general high school is considerably different, and we wish to help the situation if we can. The people of this Convention may help the situation by coming to have just as keen an appreciation as possible of what the task is that the world has set these general schools. Ordinarily they have almost nothing to do in fitting for an occupation. We are apt to ignore that fact. There is no one who has passed through the elementary fourth grade but can, in a degree, perform examples in addition. On the other hand nobody has ever graduated from a high school who can add up to the requirements of an ordinary office as regards speed.

All I am interested in as a public school man is that when we speak of a number of these claims, which in a large measure are perfectly legitimate for you to make, we speak of them as claims that should as far as possible be put on special schools or technical schools. It does not help up here for you to say that our pupils come to the office not in proper shape as to their basic education in, for example, decimals. They know a little about decimals. None of them know all about decimals. None of the people in this room know all about decimals. Let me suggest that I could puzzle the largest part of the audience in this room on a large number of questions and problems that are of course technical, and rather special, that belong to decimals, and which of course are beyond the ordinary reach of the public school. In so far as we can, we are pleased to comply with your requests. Whatever the question, it must, however, be remembered that young people to a much less extent than we are assuming are able to grasp things in terms of the abstract. It is hard to get your ideas back to those entertained by the layman. The great difficulty is that you want the young persons equipped to fit into special systems or special places, and you do not always remember that it is principles that are being taught in the public schools.

I think half of the people in this room today would not be able to give me a proper answer in the abstract as to why you invert the divisor and multiply in dividing one fraction by another.

I believe that one of the outcomes of the work of the corporation schools will be that the public schools and corporations will get together and talk in terms of more or less definite requirements.

A good many business men who know only business, make statements like this: "We do not want the boy to come to us equipped technically for a particular part of work; we will teach that boy what we want him to know in a special line; but we want him to have been taught thoroughness." As a matter of fact, that statement is absolutely meaningless. No school has ever yet taught thoroughness. Lately in this matter we are going into the field of psychology and it is wholly essential that we get down to definite things. The boy or girl cannot be taught thoroughness in the abstract. We need thoroughness in particulars. Some of us are very thorough in this respect or that. Some of us I fear are not so thorough in many things even after all of our training. One man is thorough as to his dressing, another as to his speech, another as to his eating and so forth and so on. But when we begin to make our demands upon the public schools and begin to talk in specifications, then we shall be making progress.

Take spelling as an example. In the last year or two some pretty important scientific studies have been made of spelling. and they reveal that there are comparatively a small number of words that one needs really to know in order to possess competency in the business world. There are many firms and businesses whose vocabulary—that is the vocabulary necessary in their business—is small, the number of words they use beyond the ordinary common words are very few.

I understand that you people are making a special demand for more arithmetic. It may be that this subject has been neglected a little, and we can work on that to better advantage. You have made that special demand and it may be that we will be able to help out on that. But I think it is exceedingly favorable and a promising situation in the first place that you ladies and gentlemen are organizing the special schools in your own establishment, supplementing the work of the public schools by special school work which the public school can not give unless possibly it is where there is a large demand for that special work.

In the schools that you are establishing for the interest of your company, for your factory, or what not that you are preparing your employes for, you are working on the lines of trades specials. There is nothing in the public schools that is special, the only definite things of course pertain to the general scope of education, general knowledge.

I have nothing more to say, gentlemen, and I am very much obliged for your kind attention. (Applause.)

MR. HENDERSCHOTT: President Steinmetz has appointed the following committee on resolutions and requests the chairman to call the committee together as soon as convenient that they may be able to report at the business session tomorrow morning:

Mr. C. E. Shaw, Chairman, Dennison Manufacturing Company, Framingham, Massachusetts.

Mr. Sydney W. Ashe, General Electric Company, Pittsfield, Massachusetts.

Mr. F. W. Atkins, The National Cash Register Company, Dayton, Ohio.

THE CHAIRMAN: We have about six minutes before the close of this session, and the meeting is now open to any discussion or remarks that anyone wishes to make, as long as they apply to this subject of office work.

MR. H. J. TILY (Strawbridge & Clothier, Philadelphia): Mr. Chairman, I will take three of those minutes if I may, simply to call your attention and the attention of the delegates to the fact that the discussion reached a point where it emphasizes the relationship of the public schools to the corporation schools. Dr. Snedden very calmly, very tersely, very generously stated the case exactly as many of us see it. We have problems, special problems which the public school can not solve for us except by sending us young men and young women who are sufficiently well trained in general subjects to be good students for our particular work. If one thing comes out of this discussion right now, it is that we should work for more corporation schools, and for the forming of a greater number of corporation schools, and for bringing into our businesses the school spirit. We should study our problems in terms of teaching and developing the teaching spirit in corporations. This is preferable to taking up the time of the public school man with the practical problems which are peculiar to our business, and which we are trying to adjust ourselves. Trust to him the much older business of the educator. They know a great deal more about their business than we know about ours, and they should be allowed to work out their problems in the practical way and in the definite way in which they are working them out.

I only wish to say just this one other thing: "Your attention has been called to the fact that if a man's shop is properly organized, then in the manufacturing end of his business he is following out certain technical problems along definitely right lines. Why? Because those at the head of this are school trained men! Usually they are men who have been technically trained and graduated from educational institutions, and they come into that branch of the work fitted for it up to the point where the particular interest has to take and adapt them to the special problem which they have. Now to the same thing with your office gentlemen. Get an educated man at the head of your office force. Get as assistants to him men who are educated, men who know something about other things than figures. Such men will, as a rule, make your office a much more vital, virile organization than it would otherwise be. (Applause.)

MR. SYDNEY W. ASHE (The Pittsfield Works of the General Electric Company): Many who have spoken have told of the difficulty experienced in getting co-operation from the press. I would like to make a friendly suggestion in connection with dealing with the public. When you all return home, find out who the editors of your local papers are and co-operate with them, get them to visit your plant, impressing them with what you are trying to do and leave the impression with them that you are sincere in your methods. They will readily help you to mold public opinion. My experience has shown me that editors are always ready to help providing you play fair with them and seek their co-operation.

MR. E. B. SAUNDERS (Simonds Manufacturing Company): It is a good plan to interview the editors of the papers, and to get into very close touch with the office force. We tried that and it has worked very nicely.

MR. J. C. WALKER (Burroughs Adding Machine Company of Detroit): The object we have in view, all will agree, is that we may have better office employes. I have no sympathy with a criticism of the public school system or a criticism of anything else, unless we have something of a constructive nature to offer.

There are divisions of the public schools, the commercial high school, and other educational institutions in the country, whose business it is to train office employes. It seems to me, instead of criticizing the material that comes to us from these educational institutions, we should tell them wherein their work is lacking so that they might build it up to meet our requirements. I think we will find them very ready to cooperate with us. They may not be able to do all of the things that we want done but, if we can suggest a few things that might make the workers they are training a little more efficient and a little easier for us to adapt to our special work, we will have made a step forward.

The Corporation Schools should not do the work that belongs to these educational institutions. Our work should begin where their work leaves off. If this organization could go before the organizations of school people, the commercial division of the National Educational Association, the National Commercial Teachers' Federation, the Eastern Commercial Teachers' Association, etc., with some sort of a public address or committee report telling them wherein we believe their work can be improved, I believe we would find them perfectly ready and willing to co-operate with us for the object that we both have in view, that of improving the quality of the office help that comes to us.

Mr. C. R. Dooley (Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pennsylvania): Mr. Everitt's report contains the cream of the English grammar put up in concise form and stamped with the approval of modern business men. I hope the Association can find some way to reprint this report and distribute it widely to public school teachers—possibly put it on sale as a pamphlet. Teachers would be glad to have it as representing industries' standard instead of the academic text books. They would then be better able to turn out students equipped to take up office work as it is required.

The public schools of Pittsburgh have bought from us a number of our problem books not because they contain any better problems than will be found in any first-class arithmetic but because these problems represent an industrial standard that has been generally approved.

The Chairman: Our time is up now, I am sorry. I wish to close the session by repeating, in case some of the people who are here now were not before, that there is at your disposal the experience of the National Cloak and Suit Company in training office people. We can show you beyond argument, that it is a profitable proposition. All you have to do is to indicate your interest.

COMMITTEE ON ADVERTISING, SELLING AND DISTRIBUTION

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THURSDAY—MORNING SESSION

ADVERTISING, SELLING AND DISTRIBUTION

THURSDAY MORNING, JUNE 10, 1915

MR. C. A. S. HOWLETT, Presiding

THE CHAIRMAN: The report of the Committee on Advertising, Selling and Distribution you will probably find in quite an abbreviated form as compared with former reports. One reason for this is because of the thoroughness of the former reports, especially that one on the subject of salesmanship for which so much material is available.

The reason that the report of the present committee is not voluminous is because of lack of material on the subject of advertising and distribution.

REPORT OF THE COMMITTEE ON ADVERTISING, SALESMANSHIP AND DISTRIBUTION

During the past fiscal year your Committee has held several meetings which were well attended.

Following the instructions of the Executive Committee, your Committee collected and developed a large number of questions for a General Questionaire.

A careful examination of the material collected indicated that a majority of the questions applied to the general subjects of Salesmanship, Advertising and Distribution rather than to the schools or methods used by Corporations in teaching, or that might be used by Corporations about to inaugurate a course of instruction in any of the subjects covered by this Committee.

The Committee's Report and accompanying Questionaire for 1914 was found to be particularly complete on the general subject of Salesmanship and it was therefore decided that this should not be repeated and that the activities of this year's Committee be devoted to Advertising and Distribution Schools.

It developed that there are very few Corporations who have established courses or methods of teaching Advertising, and your Committee did not learn of any corporations who have established courses of instruction in the general subject of Distribution.

The attention of your Committee has been called to the very exhaustive research that is being conducted by the Harvard

Business School which when completed will be a very thorough and comprehensive canvas and study of present-day methods of Distribution.

Our attention has also been directed to numerous magazine articles that appeared during the last year, on the same important subject, all of which point to the increasing interest and recognized importance of more familiarity with successful distribution principles.

It is recommended that member companies handling raw or manufactured products encourage their employes to become keener students of this general subject as its importance cannot be overestimated, and it is to be regretted that not more of the member companies have established courses of instruction which take up the problems of advertising and distribution, especially from the salesman's point of view.

We respectfully submit the following outline of a course of instruction in Advertising, submitted by Mr. H. Tipper of the Texas Company.

SYLLABI FOR A COURSE IN ADVERTISING

Division I

Lecture (*a*).—Advertising as a direct selling force—Advertising used in mail-order and retail business—In the first case using the printed salesmanship to actually sell the goods—In the second case using printed selling talks to bring the customer to the goods. Advertising as a major force is selling—One advertisement in this case must do the whole work from securing attention to obtaining action.

Lecture (*b*).—Advertising as a distribution factor—Line of distribution—Commission merchant—Jobber—Retailer—Effect on consumer advertising upon distribution Efficiency—Effect of dealer advertising and jobber advertising in conjunction with sales force. Stability of trade—increase of consumption per dealer, etc.

Lecture (*c*).—The functions of the manufacturers' advertising department—Advertising selling work in mass—Limitations of the advertising—Training of the advertising Manager—Scope of his knowledge—Advertising Department Medium for transmitting information from the other departments of business to the public and from the public to all departments of the organization. Divisions of advertising department—Copy, rates, buying printed matter, mailing, accounting.

Lecture (*d*).—Functions in growth of advertising agents—Advertising agent originally a space broker—Copy service, etc.—Extra service caused by competition—Agent paid by publisher—Payment of agent depends upon amount of money expended—Usefulness of advertising agent—Disadvantages of his present position—Place of publisher—Advertising service of publisher incidental to and depending upon the editorial capacity—Publisher sells space but gives advertising service—Space only of value in proportion to its possible productiveness—Commodity which the publisher has to sell.

DIVISION II

Lecture (*a*).—Newspapers—Function of a newspaper—Its appeal to the universal news instinct—Local value—Intensive possibilities.

Lecture (*b*).—Farm journals, etc.—Position of a farmer as a consumer—Position of small town as a distributing center—Farm paper a trade paper—Information value of farm papers—Advertising value of farm papers—Advertising value—Selected audience.

Lecture (*c*).—General magazines—Magazine audience selects by type—Newspaper audience by Locality—Magazines depend upon enlarged viewpoint and reading capacity—Types of magazines—Selection of audience by type—Control of copy by type.

Lecture (*d*).—Trade and Class journals—Appealing to the business interest or the hobby—Selection of audience by interest—Value of selected audience—Information character—Editorial prestige and its effect—Special advertising conditions.

Lecture (*e*).—Direct-Mail—The letter most personal form of addressing the individual—Printed mail matter and its use—Cost of direct-mail matter—Lists and their values—Direct-mail and its relations to the other forms of advertising. Outgrowth of correspondence.

Lecture (*f*).—Outside advertising—Electric signs—Bill boards—Printed bulletins—Oldest form of advertising—Display value—Limitations of advertising outdoors—Tendencies to governmental control—Character of matter to be displayed—Localizing display—Size of posters, etc.

Division III

Lecture (*a*).—General principles and arguments—Discovering the best sales arguments—studying the class of audience—Fitting the argument to the audience—Planning the general construction of copy—English—The necessity for impression rather than expression—What the copy must do.

Lecture (*b*).—Preparation of booklets, etc.—Writing of copy—Preparation of dummies—Border decorations—Illustrations and stock—Line cuts—Half-tones—Flat colors—Ben Day process colors—Papers, antique, rough, calendered, supercalendered, coated, etc.

Lecture (*c*).—Window display—Samples, etc. Cost of samples—Methods of distribution—Cost of these methods—Preparation of sample campaign—Use of samples with window display—Use of samples with store demonstrations—Visualizing effect of samples—Limitations upon its use.

SALESMANSHIP

We also offer the following outline of the method of training salesmen used by the United Cigar Stores, which is offered by Mr. H. G. Petermann of the United Cigar Stores Company.

First.—The applicant for position in the Sales Department is selected by our Employment Department.

Second.—The first requisite in our Training School is a sound body. We have a perfectly equipped Medical Department, and unless the Medical Director passes favorably upon an applicant he is not accepted.

Third.—Next to brains, one of the chief assets of a clerk is his feet, since he has to stand all day. We have a Chiropodist, who examines and treats our clerks' feet. If a man has bad feet, we do not engage him.

Fourth.—If the clerk has passed the examinations required, his papers, references, etc., are forwarded to the Bonding Company for approval.

Fifth.—The next step is the Training School for Clerks. A school store is connected with the school room, so that the new clerk may get the practical as well as the theoretical sides of our proposition, dealing directly with actual customers. There he handles human nature, goods and money.

Sixth.—All new salesmen are required to pass through this training course, which covers a period of fourteen to twenty-one days. Our method of buying and selling, also our rules relative to the handling of customers are made plain to the new man. All Departments of our business are covered in talks and text books. Lectures are given on the culture and manufacture of tobacco grown in different countries. Talking points are taught them on Amber, Meerschaum, Briar, Calabash. Good service talks, salesmanship, customs duties, internal revenue, etc., etc. In fact, the history of tobacco from the time the seed is planted in the ground until the internal revenue stamp is placed on the box that contains the finished product is explained—we get right down to the how and why, so that even a child may be able to understand it.

Seventh.—Written examinations are given to make the men think and work to determine their progress. A quiz upon the Sales Manual. Written notes on previous days' work, etc., etc. All of the men sent by the Employment Department to our Training Department do not reach a store. While in school they are on probation. Those who show a lack of interest in our proposition, or after a fair trial, do not measure up to the required "United" standard are weeded out.

Eighth.—Next following the instructions in the school is to place the new man in the Store where we can use him to our mutual advantage—The Company's interest in every phase of man-building never slackens. When the new employe leaves the school, it is up to the Sales Manager to keep him interested and at his best—the only condition under which they will keep on building. As soon as a man shows signs of going stale—and our Service Men, who check every clerk's

work will show this plainly—he is at once taken in hand by the Sales Manager to build up.

Respectfully submitted,

C. A. S. Howlett,

Chairman.

The Chairman: We are fortunate in having some of the committee with us to discuss the subject at greater length than appears in the report, and I am going to ask Professor Copeland to start the discussion.

Professor M. T. Copeland (Harvard Graduate School of Business Administration): Mr. Chairman and Members of the Association, in my remarks I shall refer particularly to the distinction between the study of the methods of giving instruction in advertising, salesmanship and distribution, and an investigation of those subjects themselves.

The first plan, obviously, is concerned only with the problems of teaching those subjects in corporation schools. How are they being taught? What methods are used? What particular problems do the teachers of those subjects encounter? That is, the subject is looked at from the point of view of the teacher's problems.

The other plan of inquiry, for which we received numerous questions, is infinitely broader in scope and calls for an investigation of the subjects of advertising, salesmanship and distribution themselves. If this were carried out, it would mean that the association would undertake to obtain from the corporations which are its members detailed information concerning their policies of advertising, salesmanship and distribution. There is no doubt that such a study would be worth while. We need decidedly more information on this whole subject of merchandise distribution. One is apt to forget, particularly if he is interested primarily in the manufacturing end, that for a great many commodities the cost of marketing, from the factory to the consumer, often exceeds the total cost of manufacturing plus the cost of the raw material. In other words, fully half of the price paid by the consumer goes to cover the cost of market distribution. Obviously there are opportunities for improvement and economy. Yet while it is easy to say that there are opportunities for economy, it is much harder to point out where these economies can be introduced. In fact, it is only from an intensive research that that can be learned.

So far as the work of this committee and this association is concerned, if an investigation of that sort were to be undertaken, it would require a separate questionaire for each class of business represented. A single questionaire would not suffice. The merchandising problems of chain stores, department stores, steel manufacturers, clothing manufacturers, automobile manufacturers and public service corporations, not to mention the many others, are similar in many respects, but at the same time there are such vast differences that one broad questionaire would probably not yield results sufficient to warrant its circulation.

If the Association should choose to undertake an investigation of these subjects, I am sure that every educator in the country who is engaged in giving instruction in marketing would welcome it. He would welcome additional information. But the question is—Does the Association wish to incur the expense of carrying out such an investigation and can it do so without arousing antagonism? Will the members be ready to furnish the information which is called for on such a questionaire?

This investigation would be expensive, since it would be necessary to have a staff of field agents to collect material and an office force constantly employed in that connection. I speak with assurance on that subject because of the experience which the Harvard Bureau of Business Research has had in conducting such investigations. Personally it seems to me very doubtful if it is advisable for the Association at this time to undertake such a broad investigation. Although a lot of work has been done, as the report of the committee indicates, there is still more that can be done in studying the special problems encountered and the methods which are used in teaching these subjects in the corporation schools. (Applause.)

THE CHAIRMAN: Mr. Tipper of the Texas Company has a contribution to make to our discussion.

MR. HARRY TIPPER (The Texas Company): Mr. Chairman, Ladies and Gentlemen, referring to Professor Copeland's statement as to the investigation of the subjects of salesmanship, advertising and distribution, there would be a good deal of danger, in doing that, of duplicating a great deal of work which is being done by other associations. We can undoubtedly get the results of the work which has been accomplished by those associations and apply it to the particular problem of teaching. There is no reason why we should duplicate the work. The association of the National Advertisers have, for instance, about 250 members, who are spending some $60,000,000 a year in advertising. They have investigated a large part of the problems of the particular division of this subject. They have a division in the automobile business, a division in the dry goods business and a division in the food products business and so forth and so on, and the problems of those factories have been discussed very intimately at executive sessions by confidential bulletins. The data files of that association are very valuable. There is no reason for spending the money of the companies in further duplicating work of that kind.

Furthermore the Associated Advertising Clubs of the World have committees and departments from the retail trade periodicals, and other sellers of advertising service, and the buyers of the advertising service, who are projecting work along the same lines. There are other associations, other institutions dealing in the same way with a study of the subjects involved in their work. These associations would undoubtedly co-operate with us as far as we need to know the subjects to consider the teaching of them.

As to the teaching of these subjects, I have always been sorry to see this line of special demarcation between salesmanship, advertising and distribution. He may begin on one of the smaller branches of one subject, but any representative in the selling force of any company requires to know all three subjects. It is my opinion that the representative of a company on the selling end of the business has the most difficult line of information to secure, and has to have qualities which are the most difficult to cultivate in this specialized age. He must be very versatile, he must have a great deal of personal tact, diplomacy, and a great deal of information on a great many lines. The large majority of businesses make a great many products and each of these products covers its own specialized information and needs its specialized line of distribution and its specialized line of advertising; and the selling forces, the man who comes in contact with the public must know the organization, he must know the lines of distribution, he must know the advertising of the product, he must be versatile, and able to deal with the public. If it were not for the fact that many of us are selling lines of goods in which the factory has already done the advertising and has already broken the ice for our selling, our selling efficiency would be very much lower than it is today. We can not expect to get out of the material that we receive, men who are already capable of handling all these various things, men versed in so many different subjects. Consequently, to conduct educational work in connection with the salesmen, with the selling force altogether whether inside or outside of the office, is the most important part of the educational work of any company. The expense of selling Professor Copeland has referred to, and he was very modest in saying that it equalled the cost of manufacture. There are many cases where it is more than five times the cost of manufacture and sometimes ten times the cost of manufacture. Our great problem, therefore, is the efficiency of selling and distribution, and when we attempt to really educate the salesmen this problem will be partially solved.

Now I have several complaints about the vocational work for salesmen which I want to speak of now. In the first place in all the selling courses which I have had the opportunity of seeing, the salesmen have been started on the technical work, and later drilled on the personal attitude of the salesman. They have made no attempt to increase the outlook of the salesman, and to my mind the most important point in connection with the salesman's work is the increase of outlook through the departments of his own and other lines of business, so that the man may accommodate himself to the viewpoint of the public, and meet his customer as a true representative of the firm, and the business he is employed in. (Applause.)

In the second place I have yet to see a sales course which attempted to take up, even in a primary way, the lines of distribution. I do not see how any salesman can be truly representative of his organization and not be wholly and thoroughly acquainted with all the conditions of the habits, needs and wants of his customers and of the methods of distributing his goods to the ultimate consumer.

In the third place the salesman goes around and sees all of the possibilities, and all of the results of his advertising. This is important in teaching him the best methods to employ in approaching customers and it is thus of the greatest importance that he have a thorough knowledge of the form of equipment of selling. Unless he knows how that equipment is to be used, and how far it functions in his work, he is losing just so much opportunity for advancing the business interests of his concern and he has lost part of his education if he does not have thorough training in the matter. I say, we have not touched the important work within the possibilities of the salesman. We have just been playing around the subject with a few small parts of the possibilities, and the most advantageous parts of the proposition we have been overlooking. Until we can take and give the salesman an inside view of the business, a close understanding of the business, the industrial view of his own work and of the distribution of the goods and of the advertising, we can not say that we have educated him. (Applause.)

THE CHAIRMAN: You will all recall that at the meeting at Philadelphia last year, at the discussion of the report of this committee, we were very much entertained and received much new thought from the discussion offered by Mr. Ambler of the Brooklyn Union Gas Company. We will now hear from Mr. Ambler.

MR. T. M. AMBLER (Brooklyn Union Gas Company): The report of the committee is so complete and furnishes so much food for thought and discussion that it is somewhat difficult to determine where to start and how to end. Therefore, I am going to confine myself to a short essay on Advertising and Selling, which might be used as Lecture "A" in Mr. Tipper's Outline of a Course of Instruction in Advertising, with the hope that I may say something that may help to arouse the enthusiasm of some ambitious person and impress upon all of you the close association and alliance of business generally with advertising, not that I profess, however, to be an expert on advertising, because my experience has been extremely limited. This may be a good thing in itself because it might possibly lead me into advancing some ideas that a person with greater experience would hesitate to suggest.

Business is advertising. Its life, stability and success depend, in a great measure, on the character and manner in which its general claims to consideration are presented.

On the other hand, advertising is not always business, because, in my humble opinion, there have been and are now too many undertaking to make a business of advertising without either preparation or experience, basing their hope for success upon the experience to be gained at the expense of trusting clients.

Advertising as a direct selling force should be backed by not only a thorough knowledge of, but an honest belief in, every factor of value contained in the article whose merit is to be acclaimed. This is the fundamental necessity that should impress every student ambitious to acquire proficiency in advertising and selling.

The following quotation from the pen of an acquaintance of long standing—William Marion Reedy, editor of the *St. Louis Mirror*—in commenting upon the death of Elbert Hubbard, seems to be of some value here:

"Every man who expresses what he honestly thinks is true is changing the spirit of the times. Thinkers help other people to think, for they formulate what others are thinking. No person writes or thinks alone—thought is in the air, but its expression is necessary to create a tangible spirit of the times. The value of a thinker who writes, or a writer who thinks, is that he supplies arguments for the people and confirms all who are on his wire in opinions often before uttered.

"All literature is advertising. And all genuine advertisements are literature. The author advertises men, times, places, deeds, events and things. His appeal is to the universal human soul. If he does not know the heart throbs of men and women, their hopes, joys, ambitions, tastes, needs and desires, his work will interest no one but himself and his admiring friends."

What he says about people is equally true about the inanimate things of business, and a knowledge of humanity must be supplemented by a thorough understanding of these various aids which make up the sum and substance of all business enterprises catering to the needs of our social and economic life.

I recall reading sometime ago that in selling or advertising, the most important feature consisted in using the same expression that you would use in speaking to the average man or woman. Then, naturally, the question arises: To what extent should we appropriate the language of the street when endeavoring to impress our thoughts upon the memory of others and whether it is not best to confine our expressions to the customs and language of the more intellectual, or to inject a few of the ordinary sayings of those actually needing the products we are trying to exploit.

The more ordinary and possibly "slang" expressions invite consideration and are apt to fix attention on account of their terseness and, to many, unfamiliar sound.

Curiosity on the part of both classes tends to incite further thought which is also apt to fix in the memory the idea it is desired to convey; however, if it is desired to advertise and sell a book in which is embodied thought and language intended to appeal to those of more refined nature, then everything used to advance its interests should be written or spoken on this same high plane. This general policy should prevail in the exploitation of any book, from the most refined down to that which common decency debars from either written or oral discussion.

There is a difference between advertising books and most other articles. As a rule, a certain character of book will only appeal to that same character of people, while many other articles, used in ordinary life, appeal equally to all classes of individuals, and it is the exploitation of these that require a more direct appeal to composite men and women.

In every advertisement, or spoken plea, there should be one central idea that will arouse attention and help to fix the mind on the thing that will appeal strongly to personal interest and at the same time incite desire for further information. Something that will arouse the imagination, and start a train of thought that will gradually create the same enthusiasm that impels you to the development and accomplishment of your purpose. Think—analyze—revolve and weigh matters from every possible point of view. Anticipate and refute every objection that may be advanced until you have thoroughly convinced yourself that your position is impregnable and then concentrate your efforts on constructive lines and formulate your plea, written or spoken, so strong and forcibly as to exclude any chance of arousing opposition, at the same time be careful to remain conservative, dignified and truthful.

"Truth is mighty and will prevail," but it is well to remember that while a statement may be absolutely true, it is generally better to qualify it than to raise a doubt; and wiser to confine yourself to facts that are not only true but that will impress conviction of that truth on the mind and preserve it, impregnable and incontestable.

We should endeavor to analyze the products we have to offer, the persons to whom we will offer them, especially, the benefits they will derive and that which will most strongly appeal to usefulness, appearance, practicability, and then select the most plausible plea that will make people accept the valuation placed upon all of them.

After reviewing the situation and becoming thoroughly imbued with all the advantages to be derived by the greatest number, then, and not before, is the time to begin to formulate a line of expression, written or verbal, that will most strongly appeal to the average person needing the particular article it is desired to dispose of. As an illustration: Suppose we take the best and highest type, as well as a less expensive one of a similar type, and being thoroughly satisfied in our own minds that there are good sound reasons why the best should be used in preference to the less expensive, also, that there are a certain number of people preferring the best—regardless of the cost to them—and others wanting the best but who must be convinced that they are not paying too much for the privilege, then an argument or advertisement needs only to cover three points. First: The high quality; second: The actual value and utility of the article for the price; and third: The fact that those not desiring to use the highest type can also get a proportionately good value in a less expensive article. In fact, advertising and selling are almost one and the same thing, the difference lying principally in the fact that the advertiser appeals without the reinforcement of personal presence, and that only serves to emphasize the absolute necessity of his being equally as well posted on the utility and value of what he is trying to advertise as the salesman.

The advertiser can not successfully advertise unless he knows the goods, while the salesman must both know his goods and be able to quickly judge the individual with whom he is dealing. Both should be good judges of human nature and each should supplement the other. The advertiser should try to write as the salesman talks, and the salesman should try to talk as the advertiser writes.

Advertising in a broad sense is the foundation stone upon which almost all business rests, but it must be reinforced by service of the right kind. To render this service requires development of all the talents with which nature has endowed us and also a correct estimate of our inherent weaknesses and an honest effort to cultivate and strengthen them by constant training and study.

So I say to you, while this course in advertising embraces a broad field, I am sure it will be worth while to you to cover all of it. The mental training you get out of your efforts will be well worth your time even if you are not able to see where you can make practical application of all that is offered you.

THE CHAIRMAN: The next one on the program is Mr. Munsell of the Dayton Engineering Laboratories Company, but since he is not present the meeting is now open for a general discussion.

MR. A. E. CORBIN (The Packard Motor Car Company): If we stop to consider it, every one of us—no matter what walk of life we may be in—is a salesman. We may be very poor salesmen or very good salesmen, but we are salesmen; and the people who are teaching office schools, vocational work or anything else are all salesmen and are more vitally interested in this one branch of the work than anything else if they would only realize it. I do not believe they realize the importance of presenting the subject, whatever it may be, in such a way that they will get the interest of their people.

The remark Mr. Tipper made here that advertising and distribution and selling are one is a very fundamental thing. The salesman presents his advertising in a personal way to a prospect whom he is trying to persuade to buy, and by his own disposition and his own personality he brings that advertising home. The printed advertisement of necessity presents its goods by an impersonal method. The object of both, however, is the same—to sell the goods.

I would like to get some help from the delegates present on a few concrete points. We have 500 salesmen. We get those salesmen by two or three distinct methods. Trained salesmen apply to us, for the stronger and higher grade the company is and the better known it is the more applications it gets from high grade people, and the easier it is for them to get people who fit their needs. We choose trained salesmen from specialty lines, and yet it is a peculiar thing that other specialty lines have not given us the results which the adding machine men have. That kind of a man makes a splendid Packard salesman. A stenographer very seldom is as successful. I believe that is because the adding machine man is accustomed to conversing with bankers and to meeting men who are officials in big companies, whereas the average stenographer, unless he is a man who is selling the large contracts, and therefore comes in touch with the officials of the large organizations, is not so capable in meeting on a plane, the type of men to whom we are trying to sell automobiles.

We are discovering, although we are in a new industry, that the best men we get are the men that we train ourselves. We take a high class young man, preferable a college boy, and put him into our shop, and give him a technical training without any regard to selling at all. We carefully select him for his personality and general equipment, so that he may be able to meet the kind of people that we want him to meet on their own plane. Then we send him out into our dealers' establishments in either an office or a technical position where he will meet the different types of people with whom he is supposed to deal later. Then he is put on to the selling work as junior man in the office, receiving no specialized sales training until after he has had from six to nine months' experience in the field. All the time, however, he is absorbing Packard fundamentals.

We used to have what we called a "man-factory." We put a man into our shop for a forty-two weeks' course, and put him through all the different machine departments, that is, we tried to teach him something about our standards. But this did not work. It cost from $750 to $1,000 per man to put these men through that course, and we found when we attempted later on to find positions for them that we did not have enough places for them, and so they went from our company to other companies. Now we will not undertake the education of a man unless a dealer promises after he comes through the shop and has gotten this training that he will take him back into his organization and will keep him long enough to try out his capabilities.

After the boys have been out in the field for six or nine months we bring them in and put them into the special sales school, a course which is especially beneficial to them after they have been out in actual contact with the work for this length of time. They have some ideas as to what their needs are and this is the opportunity for them to brush up on their requirements. With this training they can better understand the work in the factory and it is perfectly true that we can not like what we do not understand. This is the way we start our men.

We keep up the interest of the men by contests. We try to give them special honors more than special money returns, and we have found that in our contests, they will work even harder for the honor of being first than for the extra money or prize itself. The rivalry between different organizations is sometimes so great that we find individuals subserving their own individual advancement to the advancement of the head man of that organization so that he can be the top man of the company. We try to stop that, however, whenever we can.

Now these are points that I am greatly interested in. How do you get your men? How do you make them thoroughly efficient? How do you maintain their interest and keep them keenly alive to the possibilities of their field? (Applause.)

THE CHAIRMAN: Does anyone care to respond to Mr. Corbin's questions or add to the discussion of the report? We have not heard from the ladies this morning. Miss Meyncke, may we hear from you?

MISS MEYNCKE: I see another lady here, Mrs. Prince; I would ask that you ask her to address us.

MRS. LUCINDA W. PRINCE (Director of the Department Store Education, Teachers' Training Class, Simmons College and Women's Educational and Industrial Union, and Director of Salesmanship in High and Continuation Schools of the City of Boston): I do not know what you want me to say, but the last speaker made some points which I feel very strongly should be emphasized. One in particular seems to me important, that is, that the pupils should have actual experience first, then the school training; actual work in the field, before the course in the school.

If the corporations that are interested, and especially those interested in the training of office forces, would give more practice work to the boys and girls in the commercial schools, I believe they would get better results. Another point was made as to the training of salesmen. Of course they must be trained, and I heartily agree with the speaker that those who do the training should be men who know how to sell the goods over the counter. That is the problem I have in training girls for department store work and I am glad to say that school work and store work are on a most satisfactory co-operative basis.

The public schools have been mentioned and I want to tell you about the service which we have in the City of Boston. My work began ten years ago, when we started the Salesmanship School on the co-operative principle with some of the large stores of Boston. The school was pioneer in the educational field. Two years ago I took the position that I now hold in the City of Boston and established courses in salesmanship in the public schools. We now have courses in salesmanship in nine high schools in Boston. The course is an elective for seniors and in one high school it is open to both juniors and seniors. Inasmuch as the business men and the head masters of the schools have been working together only two years, I think our progress has been truly remarkable. The educators were very conservative at first, strongly entrenched in their old positions. Our experience demonstrates one thing, that with a great deal of tact and diplomacy one can accomplish wonders even with people who are already prejudiced. The high school girls have gone into the stores and put into practice the principles which they have been taught and the work has been so carefully organized that we have secured the co-operation of many stores in forwarding this work of the public schools, which will eventually react to the advantage of the stores. At the end of this second year of employment of high school girls, the scheme of junior help in one store was suggested and is being worked out in connection with the senior class in salesmanship in the high school.

I want to tell you what the head masters have done on their side, In Boston, the stores want extra help for Saturday and usually on Mondays also, as Monday is sometimes a busier day than Saturday. The head masters allow the high school girls taking the salesmanship course, to go into the stores Mondays, if they have A and B marks in their work. Two hundred and fifty girls took the course this year and three hundred will take it next year. The wages range from 75 cents to $1.50 a day. The girls undertake this work in a professional spirit and are willing to put in a day's work for the store for the sake of the highly valuable experience they gain from it. Thus the wage paid is not the only inducement by any means, and the stores are very well satisfied with the arrangement. Perhaps the most significant result of this store experience is the realization it brings to the girl's mind of the meaning of actual work. After they have had this experience, they are more interested, not only in their work, but in the persons whose places they take in the store.

Now, Mr. Corbin, we must have the same thing that you mentioned in order to secure the best work. Our experience has convinced us that we must keep up the interest in the school work and this is greatly increased and developed by means of these little excursions into the stores.

I went to see the Chamber of Commerce in Boston. I asked our department if we could not include the education of the boys also in this training for salesmanship and we met with a very hearty response. Any of you who are interested in the corporation office schools would do well to go to your public school people and offer some experience in your offices, offer to send some of your experts to the high schools to talk with the girls and boys who are taking the business courses, and invite the boys and girls to go through your place of business and show them some of the things that have to be done and the people doing them. If you approach the schools in this spirit I am sure that you will meet with co-operation.

I could tell you exactly how we teach the salesmanship and merchandise courses, but the details of the work might not be of interest to you in your varied industries.

The business courses in high schools are broad in scope and contents. In addition to the salesmanship course in the high schools, we have an elementary course in the continuation schools which are compulsory in Boston for employed boys and girls sixteen years of age.

I feel that this part of our work is but just begun, and that it presents a very wide field for our endeavors. We have excellent co-operation and I am sure that the same co-operation may be had anywhere if those interested will work for it in the right way. But as I say we have but barely begun, and after more experience, we shall learn what changes should be made.

THE CHAIRMAN: Anyone else care to add to the discussion? Mr. Hale, I have not heard from you.

MR. R. S. HALE (The Edison Electric Illuminating Company of Boston): We are experimenting, we have had the same kind of a class that Mrs. Prince speaks of, it has been very successful. I do not think we have anything further to say.

THE CHAIRMAN: Mr. Tily, we have not heard from you on this.

MR. H. J. TILY (Strawbridge & Clothier): We in Philadelphia are interested in salesmanship as taught in Boston. We take off our hats to what Mrs. Prince and the stores and schools in Boston are doing to dignify retail salesmanship.

I have felt, from the first day of this Convention, that as a retailer I might be considered somewhat out of place because I represent a class of institutions that have been pretty well down in the scale of salesmanship. We know the reason. Stores have been successful in making large sales by other means than salesmanship, the location of the store and the shrewdness of the proprietor, his technical knowledge of merchandise has brought about in many cases, a large store manned by uneducated people. Employes in most stores are chiefly men and women who, due to some need in early life, have had to join the store force before they finished their education. They have a certain amount of technical knowledge of merchandise, a certain amount of mercantile shrewdness. They achieve executive positions, and, so we often find that when stores come to a point that really is a position of dignity, they are manned by many who are poorly educated. More or less opprobrium is attached to the retail business for this reason. The work, however, is being dignified now and salesmanship—retail salesmanship as practiced by the more careful—is becoming a science and is getting the attention of thinking people and of educators; which of course means that the customers of the next generation are going to get better service.

The work which is being done by the few stores who are really studying this, and who are willing to bring to bear on the testing of salespeople and the training of salespeople certain principles which have been laid down by thinking educators as proper principles, means an improvement in the whole character of selling.

I wish that there was some way that this Association could make a departmental store group, because I believe, as it is specializing along the lines of schools, it can probably do that work better than the National Retail Dry Goods Association. I say probably, because I have not studied carefully yet what the Retail Dry Goods Association may have in mind along educational lines. I know that Mrs. Prince is identified with them now, and we are going to give particular attention to what they may have to offer. But as our Association is specializing in school as attached to corporations, I wish that there might be a department store group or that there might be identified with this Association a sufficient number of the larger stores of the country to make it better worth our while to meet. I feel that in this I am not entirely selfish; I was asked by a gentleman who was present here this morning and who represented a railroad, for a suggestive outline as to how they might improve the selling of tickets. Most of us have had experience with ticket sellers. Most of us feel that there is probably a large field for development there; to increase courtesy and intelligent salesmanship through which we may more readily learn the kind of ticket we want and the route we should take.

I spoke to him of an experience which I had in Philadelphia at one of the main ticket offices when buying my ticket to come here. The man who sold me that ticket was not a salesman, he had no particular desire to help me, nor did he have any real way of getting rid of me quickly, which is just as much a real factor in salesmanship as to supply what one wants. That gentleman had not been trained as some of these girls who are under Mrs. Prince have been trained. Mrs. Prince's girls could teach that man how to sell tickets. I believe that if the department stores of the country, the larger ones and the more serious ones (whether large or small), were thoroughly represented here, that we would have a great deal of valuable information to exchange with other members to our mutual profit. I should be glad if we could cooperate with the Executive Committee to bring pressure to bear upon the stores and through these stores on larger manufacturing industries which are not as yet represented in this Association, that our Convention next year may be made up of a greater number of representatives in situations. The work of teaching as practiced in corporations may thus be more fully compared for the betterment of business in general and the improvement in education all over the United States. (Applause.)

THE CHAIRMAN: Anyone else care to add to the discussion?

MR. NORMAN COLLYER, of the Southern Pacific Company: The company which I represent deals in only one commodity, and a commodity which can be used only once at the moment and at the point of its manufacture, namely, transportation.

You have all had your experiences with ticket agents,—I can see that. The problem of the selling of local passenger transportation is not very dissimilar to the department store problem, in that you talk with a great many customers on a small retail basis. That is, a new face comes to the counter or to the ticket window every minute.

For the reason that transportation can be used only once, and at the point of its manufacture, we have no distribution problem, but we have a very real and a very apparent salesmanship and advertising problem which is further complicated by the fact that our plant is scattered over a vast territory instead of being under one roof where it is subject to the official eye. Our employes have to work for the most part without supervision, and very largely they have to work out their own salvations. We are anxious to help them if we can and by doing so to help the public to get better service. If there are any other public service corporations represented here, I would be very glad to have them help out in this discussion.

Mr. J. W. Fisk (J. L. Hudson Department Store, Detroit, Michigan): We think we are doing some very practical things in Detroit, and I am sure Mr. Tily is doing some very practical things in Philadelphia. A few other people are doing something worth while in the department store line, but the number could be counted on the fingers of both hands, and I believe that it is part of the duty of The National Association of Corporation Schools to have a retail division and to endeavor to promulgate education among the retail clerks. I believe we can do that very much better through this organization and through The National Retail Dry Goods Association, of which we are members, and I for one would be very grateful indeed if something could be done along this line because I believe that all of us are slightly in doubt and experimenting one way and another in order to find the best method of bringing to our clerks the essentials of retail salesmanship.

I also want to express appreciation of what I have been able to learn about Mrs. Prince's work, and to state that I have found it of much advantage, as far as I have been able to learn from my practical contact and connection with my work in J. L. Hudson's store in Detroit.

I do not know whether there are any other retail men here in this Association. If there are I would like to hear from them.

THE CHAIRMAN: Anyone else care to be heard?

MISS LILIAN MEYNCKE (The Rike-Kumler Company): This morning as I sat at breakfast I heard Mr. Tily express a desire to have a section formed on retail selling.

THE CHAIRMAN: I would be glad to entertain a motion, that such a section be organized to develop and recommend such action as it deems best.

MR. H. J. TILY, of Strawbridge & Clothier: I do not know what form it ought to take, Mr. Chairman, but I move you that we recommend to the Executive Committee the formation of a retail selling section which will probably include more than simply the force, but that we have a committee appointed to make a special report for discussion next year on retail salesmanship.

(Motion seconded.)

MR. NORMAN COLLYER, of the Southern Pacific Railroad Company: I would like to inquire in the form of a question whether selling automobiles between men would be considered retail salesmanship?

THE CHAIRMAN: What do you call that, Mr. Tily?

MR. TILY: Selling it to a consumer? Yes, I call that retail selling.

THE CHAIRMAN: Are you ready for the question? All those in favor say aye. (Ayes.) I declare the motion carried.

Any further discussion of this report? Mr. Whipple, you suggested there were several things you wanted to bring up, and as there have none of them appeared as yet, will you not speak to us?

MR. T. H. B. WHIPPLE (The Westinghouse Electric and Manufacturing Company): I had no intention of speaking at this meeting, and will confine my remarks to a very few words. I wish to sound a note of encouragement to those men who may sometimes feel that they are not getting prompt and sufficient support in their educational work. Sixteen years ago I began training salesmen in the field. The companies I served were of a very enlightened kind, yet educational work was not customary—was not the fashion—and I was regarded as ultra enthusiastic, highly idealistic, and by some, perhaps, as almost fanatical. But I had convictions and some courage, and produced results, and finally my theories received more hospitable reception. Nine years ago I was appointed to do work in the training field with my present company. My selection was due to my faith, enthusiasm, and experience, and not because of technical or other educational qualifications. Field training work is a great education to the educator.

The work was a success, and the company of its own volition extended the idea to class-room pre-instruction. We are annually spending large sums of money in organized educational work applied to various functions in addition to that of training salesmen. A good idea of its extent and comparative thoroughness is embodied in the statement that 125 men, all specialists, give lectures to the students of our sales school. This work has a retroactive value, as well as a direct value. Only a few days ago the directing manager of matters internal pertaining to our sales organization said to me: "If every young man (and that means about 80 per year) were an absolute failure; if every dollar of the heavy expense involved were a dead loss so far as the education of the candidate, salesman, per se, is concerned, we would still justify the expense because of the good it is doing for the instructors themselves."

Our work is highly specialized work. We are manufacturing and selling engineering and scientific products of ultra refinement. Our organization consists of three principal departments, divided into about thirty-nine divisions, with an average of not less than seven distinct products to each division. This necessitates a large body of semi-specialists and specialists and super-specialists. They are practically all college men. We recognized their ability so far as knowing their product is concerned, but we wanted to determine their power to impart this knowledge to others. We suspended our sales school long enough to train our instructors and to organize for more effective work in the educational line. The result was very gratifying, and it is our purpose always to keep in mind this matter of educating ourselves while we are trying to educate others.

There is one of my old friends in the company who used to be a great salesman himself; then he was District Manager, and afterwards held a much higher position in the company. I knew his wife and children, and his friends and his father, and we were close friends, yet I could not drag him across the threshold of our sales school for over five years. Today we can hardly keep him from filling up our columns, writing articles on salesmanship and its theory.

I just want to say, "Keep going." We don't need so many teachers; we need leaders. In this work we need a few Billy Sundays, men of dynamic type, and I think it would be not a bad suggestion to make here, that probably in this organization we might find a few men that could take a group of industries which would keep them comfortably busy, and train men who could train the trainers. The mere getting of information in a school doesn't mean so much, except to the boy who can generate his own ambition.

Now, I believe the great teacher is the man who can get a lazy boy to work and keep him at it. And we are going to develop our schools, and we are going to develop men who are highly qualified for the work. Teachers have not been developed in sufficient number to fulfill the needs, and probably if this organization could have a few men whose duty it was to go around to business institutions and visit schools of this kind and do what the average teacher can not do in the line of inspirational work, the experiment might prove a success.

I want to tell you a thing that you may consider very surprising: In Louisville, Kentucky, years ago, there was a man named J. C. Cheneault, a product of Harvard, but a native of Kentucky, and you know what a combination that was. He could take the laziest boy on earth and make a hard student of him. and in his school there was positively no difference in examination paper results, because every man was 100% letter perfect, the only difference being in native ability and previous education; so far as classwork and examination results were concerned, they were all perfect.

We have heard a great deal of talk about this question of home study, but the talk does not amount to anything at all until you get the attitude of the student right. But when someone comes along who can point out the thing in the right way and make the boy believe that work is not only useful, but that it is pleasurable, then you will find that you will not have the "kicks" coming on home work.

JOHN G. OLMSTEAD (Vocational Director of the Y. M. C. A. of Providence, R. I.): This question of retail selling is a live one outside of the members of this organization, as evidenced by the fact that the Retail Merchants Division of the Chamber of Commerce in the City of Providence within the last month has asked me to lay out for them a course of instruction in salesmanship for their male employes. Not any of the members of that division of the Chamber of Commerce are members of this organization. I think if such a program as has been suggested is formulated, and effort is properly made, many of those men could be brought into membership. I know that the conferences conducted by such a retail group would be very helpful to the men of Providence and especially to me at this time in laying out a course for their salesmen.

I might say that in submitting a tentative course to the Chamber of Commerce the one thing that has been the hardest for me to impress upon them, a thing that to me seems most important, is that they should give to the salesman the viewpoint of the whole organizaton. They should make him realize that he is a large part of the organization and that everything which he says and does is vitally related to the success of that organization.

It is a common feeling among retail salesmen, more so than among saleswomen, that there is no future; that they are in a position where they must stay the rest of their lives; that they are in a rut; that at best there are only a few positions higher up in the organization and there is little chance for them to secure promotion.

The thing that needs to be emphasized over and over again to the retail salesman is the dignity of his position and the importance of his place in the concern. He should understand that the success of the retail store is dependent upon the attitude, experience and knowledge of the salesman.

THE CHAIRMAN: A question has come up about training salesmen by correspondence, and I am quite sure we would be interested to hear a few words on the very peculiar application of the use of correspondence methods of teaching to the art of breaking horses. Mr. Beery, of Pleasant Hill, Ohio, is with us and we would be pleased to have him tell us how he was able to teach the breaking in of horses by a correspondence course.

MR. RAY BEERY (The Beery Correspondence School of

Horsemanship, Pleasant Hill, Ohio): Mr. Chairman, I think this is the first time in my life that I have been called upon for a speech in a gathering of this sort.

Our business is unique. I think my father happened to train horses for something like twenty years and after his health became poor, he wrote his experience in a correspondence course. He started this about five years ago. We attract the people to send for free introductory courses, and we give the inquirer a few of the fundamental points about horse training, just common sense points but some he has not thought about. These interest him and he then receives a large prospectus which is followed by about four follow-up letters. He may prefer straight price or installment plan. He is listed for the regular solicitations in the spring and in the fall, the big business being in March.

After selling the course to a small per cent of those who inquire, they are solicited for a certain sort of harness which is used in taking advantage of the horse's strength. The whole business, of course, in horse training is simply to make the right impression upon the horse's mind. He may have been a kicker all his life but if you train him for one lesson, in half an hour or so he will be so trained that he will never kick any more in his life, if he has anything like the right sort of a driver.

I think you would be interested in a little book recently written on the selling of harness. It was sent to about twenty thousand people none of whom has bought the appliances or special harness, but all have been solicited time and again. We sent first, half a dozen follow-up letters, after we had received the money from the course and then we solicited them each spring and fall, but, notwithstanding that, they have never ordered. I looked into the business of the harness proposition of which I have spoken and I did not believe that the appliances should be advertised as "strong enough to hold an elephant," in other words, too much description was not good, but rather it was better to represent the case wholly in terms of advantage to the student. I thought that when we were able to do that, we would be doing successful advertising and that to accomplish this result we should not make exaggerated statements about the merits of the commodity and have a man nod his head and say, "yes, yes, yes." A man can nod his head to statements and yet not be influenced to buy it or even want it. In other words, I think we are sometimes inclined to assume the point that should be played up the strongest and make too much of points of minor importance. This little book that was written I called "Pocket Book Secrets in Horse-training." From the student's standpoint it was a book full of helpful suggestions and ideas. From our standpoint it was the talking over of points with which we could best ring in the use of our special harness. The foreword was so written as to convey an individual appeal to each individual man.

The booklet contained about twenty pages and each man to whom it was sent has told us that he could not say enough in appreciation of it, since it gave him so many good brief suggestions on horse training. For instance, in the first part of the book—I thought this would touch a weak spot—we said, "Now one of the first things that will come to your mind is, where am I going to get the horses to train?" Well, instead of telling that point there, we say that is the last thing you need to worry about. I will give you some hints on that later on. And I think that is the important point, because it carries the reader clear through the book. At the end I say, "Out of my twenty years' experience in training horses, I have had quite a bit of experience in advertising, and writing up bills. I am going to write one for you whch I believe will exactly suit your purpose." So I take one page and print a bill on it, and explain below that the actual bills will be 6 or 9 times the size of that page. After I get through advancing that thought and putting up questions which will arouse their curiosity I say, "I am not going to put you to any trouble about that advertising at all, I have a printer right here in Pleasant Hill, and I will have him print eight or ten copies of this bill for you and you can put them on the walls in your blacksmith shop." This is usually a suggestion he has not thought of before and the idea of my taking enough interest in him to do this makes a favorable appeal to him.

There are many little points my father has worked out of which very few men have thought. These little suggestions, thrown out at the right time and in the right way, have proved to be a wonderful lever in all of our advertising. It is surprising to see how much prospective customers appreciate these things and even feel rather obligated as a result of the smallest suggestions.

The Chairman: I am quite sure we will all agree that this is not only entertaining, but very inspirational for those of us who think we can not teach men salesmanship by correspondence methods. Mr. Beery has found 40,000 people to whom he can teach by correspondence, the art of breaking horses.

MR. DENNISTON: I would like to ask the advertiser when he teaches how to train horses by correspondence, how successful his customers were in carrying out the instructions?

MR. BEERY: That is a very important point because if they were not successful we would not be successful.

MR. DENNISTON: Most people will bite once on anything that looks good.

MR. BEERY: The mere fact that we can sell our appliances —650 sets of appliances were sold on this last proposition—indicates that students are satisfied with the course and the daily letters received tell of their success in applying the lessons.

THE CHAIRMAN: If there is nothing more the Chairman will be glad to entertain a motion to adjourn.

Motion made, seconded and carried that the meeting adjourn.

ROUND TABLE DISCUSSION

ADVERTISING, SELLING AND DISTRIBUTION

TUESDAY EVENING, JUNE 10, 1915

THE CHAIRMAN: It is our purpose to discuss these general subjects giving particular attention to the methods employed by corporations in teaching them. I have a few questions here that we will discuss, but in order to develop greater interest will you be good enough to write down on slips of paper such questions as you will want to discuss and we will be glad to bring them up. I have a few here to start on, and for the benefit of those who have not attended any of the conferences, I might explain. Possibly the most value has been derived from discussions where we sit at a Round Table and read a number of questions on which answers are wanted. Each gets the answer to his particular question or questions and goes back very well repaid for having attended the convention. In discussing those questions it is our desire, if possible, to give every one in attendance the benefit of our experience.

The first question—Can you recommend a correspondence course in salesmanship that presents in a clear manner the principles that govern success in the sale of books?

A DELEGATE: We have had a salesman's correspondence course for some time. We did start out with a consideration of general salesmen's courses printed and supplied for the purpose of teaching salesmanship, but after a considerable amount of study of those courses, and some work on them, we came to the conclusion that they would not work out for us as they should for two reasons:

> 1. Because the salesman, as a rule, is not a student. If he has studied at all in the course of his life, he has given up that study many years before he became a salesman, and he has very little of the art of concentration.
>
> 2. Because, necessarily, in making up such courses for the use of a great many lines of business, the illustrations were not always applicable to the cases we had in mind, nor did they fit in with the particular circumstances in our own business.

That does not say that we have not used the material which is available from textbooks, and from courses which have been prepared in various ways by educational institutions on salesmanship. We have used the bulk of that material, but we have used it by applying it to our own business. We have taken the illustrations from our own business. We have applied the circumstances to our own business. We have avoided general terms, scientific terms, technical terms in connection with the work. We have changed these courses and applied illustrations that the salesman can pick up—that he runs up against in his daily talks with customers; actual illustrations that he has experienced—that his fellow salesman has experienced in the same district. There are certain courses that are established for general use, but with these courses we have a great deal less interest displayed.

We have used most of the scientific information that has been produced in textbooks of other courses, but the salesman did not see the application of that scientific principle to his own business until we applied it to his own daily work.

A Delegate: I would like to ask if the last speaker would mind going into detail as to just how he handled his salesmen—whether he held classes or did personal work.

A Delegate: This is done entirely by correspondence.

A Delegate: Do you use the actual instruction papers?

A Delegate: No, we have used our own instruction papers. The instruction is carried on by means of correspondence, as the students are scattered all over the country.

A Delegate: I don't want to say much, but a point has been brought out that I would like to talk on—that the salesman is not generally a student before taking up salesmanship. I have taken an illustration from the professions. If a physician should just content himself with the book knowledge and little practice that he received in his University course, and depended on that for the rest of his life, he would make a very poor physician. Practice is necessary, he should read current literature occasionally to replenish his mind—even the textbooks he should look over, because he is apt to forget that which becomes a matter of habit with him. So with the matter of salesmanship. The salesman, after all, goes out and does things, and when he has had enough experience, and as he advances in age, he is apt to forget that there are principles underlying the subject, and is apt to grow a little rusty.

So I think, so far as our end is concerned, we have with success reinforced the salesman with thought, with labor, or with correspondence matter on the principles of salesmanship, applying our illustrations not to salesmanship in general, but to the particular business on hand.

The correspondence course, however, cannot be depended upon exclusively to turn out successful salesmen, but it is a good adjunct to the daily experience gotten by the men and it refreshes their memory. I have replies from two of our agents selling goods—both experienced men who have done well with their work—that, as a result of the material we have prepared for them, they have been refreshed upon things usually overlooked. I would suggest correspondence courses in conjunction with the daily experience, and in conjunction with the usual work. You will note the spirit that is infused into the salesmen by the enterprise.

A Delegate: Do you find it desirable in the correspondence instruction to have a paper come back from the salesman showing that the man has done his work?

A Delegate: We do not have to require it—the salesman likes it—for without it he himself feels that he has not definitely gotten over the ground. We put that question to the men in sending out some of the papers—whether they like the questions—and the answer came back invariably that they would not do away with the questions for anything.

The correspondence course is the hardest thing in the world to work out. It is the greatest pedagogic problem that man has yet dipped into, for it is very difficult to frame the questions so that the man cannot answer them directly from the text book, without applying the text book knowledge to the problem.

A Delegate: Do you require written replies to those questions?

A Delegate: We do require written replies to examinations that we send to our agents, and we have been very well satisfied and pleased with the results we have been getting. It is true that we are apt to get back what the book gives us, but none the less if a man takes the trouble to study a book, and even though he records part of this knowledge, it is impossible for a man to copy the answer verbatim, and in adapting it to his own language, the subject is fixed in his mind, and so the system has been found very valuable.

We send out a paper with ten questions that require originality in the answers. One of these questions follows: What part of this lesson has benefited you most? There, of course, we give full play to the man, and the replies are really instructive; they show the value of the course.

We likewise have been deeply impressed by the treatment of the ethics of the profession. It opens up a new field which a man started for but which he has overlooked. The correspondence courses show a man that what he has been doing as a matter of daily habit is really amenable to scientific principles.

But the written replies are very good and we have a staff of examiners who examine these papers and show the agent his weak points.

A DELEGATE: Can you recommend a correspondence course for salesmanship?

A DELEGATE: We have used the Shelley Course and the System Course. The System have a series of little booklets on salesmanship that are really very good, because they are in a way popular, the man does not become confused with general definitions that he cannot grasp. We have also used the Shelley Course, which is very good, and we have used some of the textbooks on salesmanship, I forget the names, but some of the general textbooks you all have in your libraries. That is the basis upon which we have worked out our courses, illustrated by men who are familiar with the actual conditions of the business.

A DELEGATE: I would like to ask how long Mr. ——— has pursued this system, and whether he has any figures on the results? What is the increase in business?

A DELEGATE: We have pursued this course now for approximately three years. We cannot give to date a scale of results which is iron clad and proof against argument. I do not know whether we will ever be able to do so. For instance: Some of the very best salesmen we have ever employed, by reason of their capacity for selling are successful, but they are not students and have had a great deal of difficulty with the course. We find that a poor salesman is usually a poor student; we have found practically no exception to the negative argument.

Generally we have found that the average of the salesman rises. We have some exceptions, due to the fact that successful men are not taking the course as they should, but that does not do away with the fact that we are getting better work from the average salesman who takes the course—practically all of them have taken it now—and that we are weeding out with less expense some of the poorer sales material that we have had.

A DELEGATE: Do you supplement that course by field training?

A DELEGATE: I have done so. Our course is conducted at the present time by the man who has actual charge of our selling.

A DELEGATE: Yes, but do you have such men in the field?

A DELEGATE: Yes, we have several men out in different branches in the different fields and districts, whose duty it is to do nothing but watch the salesmen and train them, and we have one man covering to advantage the whole country. He has nothing to do with the courses but he has to do with working with the salesman, showing him his weak points and helping him to overcome them.

I have used the twelve lessons covered by the Economus Training Course, and find them very good. I have also used a book on "Salesmanship" by Wm. Maxwell, which is very valuable, and several books by E. St. Elmo Lewis.

A DELEGATE: With regard to the course of study by correspondence. The correspondence course takes, I think. But, people who are selling and doing everything else all day cannot devote the amount of time that is necessary to get very much out of a correspondence school. It means a great deal of study, and then, too, very careful work in the preparation of a paper that they are willing to send out; it means hours of work to the average person selling or doing anything else. It is a splendid training for the individual. They do get points, not always applicable, perhaps, to the business at hand, but it is good training. It is hard training, and I doubt whether 1 per cent of the salesmen are willing to do the work, not really because they are unwilling but they have not the time.

A DELEGATE: I would like to have a word or so. We have an Educational Department at our home office, but we find it essential to have our own course in life insurance. Our agents are asked to take the course, not compelled to, but new men find it to their advantage because it teaches them in a brief and concise manner the principles of life insurance, and everything that goes into the making up of a policy. There are about a dozen lessons, and when the agents send in their replies the answers are corrected by competent people at the home office, and all the help that is necessary is given. That work is supplemented by personal instruction at the home office in the case of new men, who are asked to come and serve some time at the home office.

We aim to get successful men out of other lines of business; we have given up trying to get men in the same line. When we find a successful man we put him through this instruction, supplemented by an additional course called the "Credit Course," which goes into the work somewhat further, and with which we have had very good experience. We find today that the poor life insurance agent is one who probably has not taken very much interest in the course. The Shelley School, located in Philadelphia, has a very good system under certain arrangements, the details of which will not interest you.

The point I wish to make is that we found it necessary to devise our own course—we spent some time on it—and the results we are now getting are not as satisfactory as those we expect to get with constant revision of the work.

The Chairman: We will take up another question. Would it be productive of good results to have clerks copy twenty times a selling talk on a certain article? (No discussion.)

What is the most effective way of inducing men to study the art of salesmanship? This might be changed to what are the most effective ways of inducing men to study the art of salesmanship?

A Delegate: That was answered in the last question.

The Chairman: Anyone else have any thoughts on the subject?

A Delegate: The idea was brought out that the poor salesman was probably necessarily a poor student. Nothing was said along the line of giving him motive for study.

A Delegate: There is one answer I heard given to that general question, not applying to salesmanship only, but applying to all educational work and corporations—how can we get the men interested. I heard the answer given by one of the officials of a large electrical manufacturing company. He said he was not in favor of educational work unless there was constantly an opening door ahead of the man who was studying; that is to say, he would not endeavor to interest a man in doing strenuous educational work after working hours unless there was constantly an open door for him to advance through. The motive scheme has to be worked out along with the educational plan.

THE CHAIRMAN: What method should be adopted to induce men to study their individual customers?

A DELEGATE: The gentleman who asked that question has in his own organization the answer to a certain extent. He has a very clever magazine. Tell him to make that magazine still more clever.

THE CHAIRMAN: One of the questions in the questionaire—What fundamental qualifications are required of a candidate for salesmanship in your company—has been discussed for a number of years and we have here a summary of all the replies. This seems to me gives very valuable information. The one that is mentioned first I might explain is always mentioned first in every summary of any questionaire, and that is honesty. Sobriety is next in order, education, energy, enthusiasm, good address following; and then they use the words personality, tact, and ability to express one's self.

Here is another question—what has been your experience with men fresh from college, and without business training? I have a summary of the replies. One man said that his experience was good if the men came from small colleges, and had small funds or worked their way through. Three companies stated they had no experience; six stated they had very unsatisfactory experience; seven stated they trained college men first in their other departments.

This brings up the general subject, whether we should select college trained men or men without the advantage of a college education. Do you care to discuss that subject?

A DELEGATE: I think your first answer is a pretty broad discussion.

THE CHAIRMAN: Shall we take that as the consensus of opinion?

A DELEGATE: We have no right to expect a college man to be more valuable, although we expect him to develop more rapidly.

A DELEGATE: The fact that a man has a college education should not put aside the larger matter of aptitude. Because of his training and ability to think you can get a college man who may be entirely successful as a college man, and who, if put in the wrong position, will be a miserable failure. I think the subject is far too general to draw any statements.

A DELEGATE: My short experience with college men has been that the best men come from small colleges, with the possible exception of larger institutions in the East. Good sales material has been drawn from the men who work their way through. I have known men who ran laundry agencies; another man who ran a peanut stand or stands, but never went near them himself. It is best to interview this type when choosing your sales material.

THE CHAIRMAN: I might cite one more example. A young man, a college graduate, was being examined for the sales department of a large concern. He said he had earned the money to put himself through college by "beating a drum." Apparently he was trap artist in an orchestra, he was a drummer. He belonged to the Musicians' Union and received $5.00 a night for beating the drum. He is a very good salesman.

On this general subject of the training of college men, my experience has been that it did not make very much difference where the men came from, what college they came from, whether it was little or big, but the ultimate success of the men depended more on where they were sent after they got through their training. It did not depend upon the training; it did not depend upon the work; it depended on where they were assigned geographically. We select men to send out all over the world, and if we selected a man, for instance, born and brought up in Worcester and sent him out to Chicago, he would last about twenty minutes. If a man was born and brought up in Chicago and came to Worcester, he would last about ten minutes. If we wanted to send a Southerner up to Alberta, he probably would not go, and if he did he would not last when he got there. If we sent tall men to one office they would not be received; they had some aversion to tall men. If we sent anybody to our Boston office who was not born and brought up in New England, he would not be received; if we sent a foreign born man to one of our domestic offices he would not be received. The ultimate success of the young men depended, it seems to me, almost entirely upon where they were assigned geographically, and not what they knew or their ability for the work. Ninety per cent. of a man's success depends upon his assignment, 9 per cent. on the selection, 1 per cent. on the training.

A Delegate: What line of goods was that?

The Chairman: Machinery.

I have another question: Are men with or without sales experience best?

We have received replies as follows: men with experience—was given as the answer from six companies, men without experience—five companies, and it made no difference with five companies whether they had any experience or not. Does anyone care to add his experience to this question?

A Delegate: I would like to ask a further question. Would you say that a man who is a successful salesman of machinery would make a good clothing salesman? I mean anything entirely different from machinery.

A Delegate: A man might be a good clothing salesman and not a machinery salesman. A salesman should be able to sell anything, for the principles are the same. Arouse his interest, and instead of one thing he will sell several things. It is a matter of psychology. No man can sell a thing that he cannot completely understand.

A Delegate: Would you say that the mere ability to solicit would make a man successful in any field? I am referring particularly to the statement that insurance companies are trying to get successful men from other lines of business, and I would like to know to what extent this has been carried.

A Delegate: We have had very good success in taking men from other lines of business, and it does not seem to make any difference what lines they come from. I have in mind one man who came from the grocery business. This man qualified for a convention in 39 days. I have in mind another man who was an efficiency engineer, another a cashier of a bank, another man who was one of the best known athletic trainers in the State of Pennsylvania. I can recall these men because we are going to run an advertisement in one of the newspapers, giving their pictures, and we ourselves think that it speaks very well for our training.

Now when I speak of selecting men from other lines of business I have perhaps this qualification in mind—that we want to get young men; I do not know what our age limit is, but we do try to get them as young as possible.

THE CHAIRMAN: Another question, unless you care to discuss this one further. Question No. 76—What percentage of men resign or are dismissed during the first year? The answers to this question are classified as follows: Very small percentage—reply of six companies; no records kept—reply from three companies; 30%—from one company; 20%—another company; 10%—from another company; 5%—from two companies. Does anyone care to discuss this further?

Question No. 77—What have you done to decrease this percentage of loss? The replies are as follows:

Greater care in selecting men—six companies.

Educating the salesman—six companies.

By adopting means for keeping up the interest—four companies.

Increasing the wages—three companies.

Question No. 78—What is the basis of remuneraton? Replies received were, salary—seven; salary and commission—seven.

There are a few other questions, but I have picked out the ones I thought were the most interesting. If you have any questions to ask you may do so now.

A DELEGATE: I am interested in knowing the consensus of opinion here as to the value of sales demonstration in the class room. My company thinks that there is nothing better in the line of training than field training.

A DELEGATE: I might be able to say something about that. I am a teacher in the evening high school, and the school board has put in a course in salesmanship and has given it to me. We tried the demonstration sale without the product and it did not work at all. You cannot call a book a coat and on that basis proceed to interest the prospective customer in it.

A DELEGATE: I think the demonstration sale without the article is practically useless, but with the article it is of great value. Just like sitting here and seeing others get up and talk, but you do not really get the spirit and the worth out of the meeting unless you get up and say something yourself. Unless a man goes through the actual sale he does not really understand it, nor grasp it. I think the best way of showing the work we are doing in our department store is to have the picture of this demonstration sale showing a sales person really selling hosiery, with members of the class acting as customers, and the whole transaction carried out in the right way. I think this is very valuable.

A Delegate: Suppose you take something like an incandescent lamp; bring in the question of policy, service and everything of that kind, which is the real art of salesmanship. By getting down to high grade salesmanship, what is the value of sales demonstration in the classroom? Taking for granted that you have your purchasing agent, that you have given the salesman a chance to fortify himself, can you determine his diplomacy, his manner and personality better in this way than you could in any other way? Acting is part of the salesman's makeup. If a salesman hasn't something of the actor in him, he isn't a salesman, and there isn't a salesman that acts naturally. We do not act naturally when looking for a position. We always put the best foot forward. You put out your best efforts and endeavor to come up to what you think is the standard.

Now the sales demonstration is not a good thing if not properly conducted. The purchasing agent does not take this as he should; he does not take the time for preparation. Four hundred students have passed through my school, at an average age of twenty-four. They have been selected with the best care, but they do not know how to approach a customer. We think of looking a man in the eye when we talk with him, and fifty or sixty things by which we can judge whether or not he would be a good salesman.

In all of our discussion we have not talked about native ability. If we can select the right men they do not need much training, but I believe in natural ability.

A Delegate: Speaking from the department store point of view the demonstration sale is by all odds the best way, other than actual field experience. It is a question, however, of the method of teaching. Of course, we teach salesmanship to rather immature minds, people beginning at the bottom, and in that our problem differs from yours, but if we taught those people by the lecture method we would promptly put them to sleep.

Some of the best lecturers in the country would have this effect; they might keep them awake for a while but a lot of it would go over their heads.

The method we use is the question method. I sat in a class for two hours where the teacher did not state one thing, did not tell the pupils a single fact, but got all her information from them by asking questions. If a question was answered wrongly she would ask: "Well! do you all agree with that? Why do you agree with it? Why do you disagree?" Those little girls (there happened to be seven girls in the class from 17 to 20 years of age) were thinking as fast as they could; their tongues were going just to the limit. They were looking for the answer to the next question.

A DELEGATE: One of the most important things in this method is that after a demonstration sale there is a discussion by the pupils of the class. The sale in itself is not so important inasmuch as it furnishes the material for the discussion afterwards. Then in the matter of the electric light business—the public schools of Boston have had a school in The Edison Electric Illuminating Company during the past year made up of men from twenty to forty-five, and because the public schools did not have a man ready to teach this course, they picked an assistant from Mrs. Prince's school, and one of their most interesting lessons is the demonstration sale of electricity. They have customers who put up an actual proposition. "I want this building furnished with electricity, and this power plant arranged for. How would you do it?" In this way they have to sell the prospective customer his power and light, carrying out this same idea of the demonstration sale.

THE CHAIRMAN: I will explain how we run demonstrations, and we find them of very great benefit to the men; in fact they claim that they are more interested in the demonstrations than in any other work that we do. We select one man to make the demonstration, and he is sent out of the room. The door is shut and he knows nothing of what transpires. He is left out there a reasonable length of time, and while he is out the different sales students will offer objections. (I might explain that we give an exact sales problem.) For instance, an electric light company is contemplating selling flat irons, and this salesman is representing a manufacturer who makes electric flat irons, and he is to approach this central station and convince them, first, that they should sell electric flat irons, and, second, that they should sell the ones he is interested in. That is all the salesman knows when he is sent out of the room, and while he is out each student will offer the obstacle that he has in mind, that if they were called upon to go to this central station to sell flat irons they would be able to meet the objections, so that if the central station man asked them a question they would be ready to answer it. They would like, however, to see what this fellow is going to do, and so the man who is acting as the purchasing agent writes down all these objections. Then when the salesman is sent for he comes in and approaches the purchasing agent as he would the manager of the electric light company, and from the minute he enters the door his every action is noted. Each student has a chart as follows:

	Tact	*Initiative*	*Aggressiveness*	*Suggestion*	*Knowledge of Goods*
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
Director					

Signed ....

As the salesman approaches the customer he is marked by the students on the above subjects. For instance, let us take tactfulness; suppose he does not take off his hat, or puts his travelling case or whatever he may have on the customer's desk, or does some very crude thing that would irritate an ordinary customer, each student, according to the plan, will immediately give him a demerit of 10. The assumption is that if he is absolutely perfect he is entitled to 100%. Of course, there is no such thing as a perfect man or woman, but we assume for argument that he is 100% perfect unless we can detect some error, so for every error he makes under the head of tactfulness he is given a demerit of 10; one error would give him 90%, two errors 80% and so on.

The different students would offer objections as I have explained, and these objections would be called to the attention of the salesman. For instance, the purchasing agent would say: "We do not want to sell electric flat irons; we do not care to; the business belongs to the hardware stores," and so on, and then the different students have to determine in their own minds whether or not the salesman displays the proper degree of initiative in getting out of the difficulty they put him into. Now if he stops and looks at the purchasing agent with absolutely no thought or evidence of thought, why naturally he is not up to the standard of the qualifications of initiative, and therefore he is marked off 10 for a display of ignorance.

The same system is used for aggressiveness. If he is over aggressive to the point of being irritable, why, he is given a demerit of 10; if he is not sufficiently aggressive he is given a demerit of 10; this is the basis for assigning the percentage mark.

If he should display the improper use of suggestion, if he should say, "Well, I don't suppose you want to buy flat irons anyway," we would mark him off 10, until we arrive at a percentage mark for suggestion. Then we assume an average which is worked out. These marks are determined as the demonstration goes along, and when the demonstration is finished, the students immediately assign the marks without referring or consulting one another. Then we tabulate those marks, each number representing a sales student and the different qualifications would be at the top.

The men with the highest mark were to write little papers on the subject on which they had received the mark. It was found that men were very weak in the display of aggressiveness in the sales. The aggressive ones were always found among the less technically trained men. In many cases not the proper spirit of aggressiveness was displayed. An example of this was given where the prospective salesman walked into the room with a swagger and with a terrific pound on the desk with his fist, demanded that he be given the business. We expect the men to get the knowledge of our goods; we expect them to get much of their mechanical knowledge in college, and they learn of our goods through one year's work in our shops.

A Delegate: Do you have an attendant discussion besides these signed papers?

The Chairman: Afterwards.

A Delegate: Do you give the purchasing agent, the teacher and every student a chance to criticize?

The Chairman: Not during the sale; we would not allow any interruption.

A Delegate: One of the greatest objections we have to the demonstration, aside from the great difficulty of making it realistic, is the time consumed, not so much in the demonstration itself but in the preparation. The student will have to keep up his daily work, and he will want to spread himself on this particular thing, and in this way he is apt to neglect his daily work and concentrate on the subject of sales demonstration. This is one of the greatest difficulties we have been confronted with.

The Chairman: I might explain that this work was done during a period of four months where the students were not expected to do any profitable work at all. They were four months in the class room or visiting factories to watch production, so that they had no regular work other than what might be called educational work.

A Delegate: Were they on salary during that time?

The Chairman: Yes, they were paid $16.80 per week. In making application for the position some of the men made inquiry as to what would be the outcome if they finished satisfactorily, and when the matter had been explained to them the salary question was brought up, and they were told what they were paid. "What, do we get paid for this?" some would ask. Others would say: "Is that all we get?" Some more would say "Do we get all this for nothing?" while others thought it was not enough.

	A	B	C	D
Willingness				
Reliability				
Aggressiveness				
Initiative				
Suggestion				
Profitableness				

This chart applies to but fifteen men in the sales office, while the former chart was for the sales demonstration and covered about 450 men. One peculiar characteristic—we had one man who was the exact type of the salesman. His marks were the highest in all but one thing—reliability. If he had an appointment at a certain hour, you would not know whether he would be there or not. Instead of using his inventive ability to think out methods, etc., he used it to get himself out of scrapes and to think of excuses to cover up this unstable characteristic. He had to be dismissed to increase the efficiency of the other sales boys. As a general thing we found that the men were anxious to see if they had made any improvement from month to month.

A DELEGATE: I do not wish to dispute your figures. You must be a very practical man and you have given us an excellent demonstration which may be applied to many different businesses, but if the training which you give in your business is worth only 1 per cent, in some businesses which are represented here it must be a much larger per cent.

Nobody can quarrel with the fact that we must begin with the right person, whether that person comes from college or is trained in an institution, or is taken from some other line of business. If they are afterwards to have success, they must be started right. If not much more than 1 per cent is expended in the training I do not believe we would have traveled quite so far, nor would we have spent quite so much time here. There must be more than that attached to the training for salesmanship. I should say at least 5 per cent attached to the simple demonstration sale.

We are all actors as you have said. Now salesmanship is an art, and there must be a certain amount of imitation in it. Like other arts there is a certain technique, and that technique can be gained most rapidly, I think, by imitation. Those who have had experience in the teaching of other arts—music or painting—certainly realize that technical instruction must go hand in hand with demonstration, so that the student may imitate. Now I believe that it has a great place in the teaching of salesmanship, and I am very glad that representatives of insurance companies are here, because it is quite true as has been stated that it is the most difficult thing in the world. You actually have to make your customer. The problem is to educate your customers. We want to educate them up to the point of taking that which we have to give them, and that is the reason we educate them.

Now if we have the right people, and if we have placed them properly, we certainly can increase their sales, if nothing else, by giving them the right training. They have to do it by correspondence, and they are undoubtedly doing it well, because of the stories we have heard this evening. But those of you who constantly come in contact with the people who are handling your goods, let them see in you a good salesman, let them see in you the qualities they want to see, and when they ask for an explanation of the things which they are asked to buy, be prepared for them. No person worth while training will ever accept a fact and adopt it as part of his work without having a fairly good reason for it. Now if that reason can be a scientific reason—if it can be a reason which appeals to their reason, which gets back of their desire or their emotion to their intellect, so that they know it is the right thing to do, the fundamental reason for that particular thing—you are making that act of theirs intelligent, which makes them just the right kind of sales people.

Now I do not train sales people. I do occasionally make speeches to directors who are training sales people, but I wish to take this opportunity, for fear I may not have another during the week, to say that we all want this teaching—it is what industry wants today more than anything else—the teaching spirit and then the ability to teach. The trouble is that the teaching spirit has not been aroused throughout American industry. Now it is coming about here as all things in America come about, because the people feel that it should be done. It is getting into our industries, and the teaching spirit means greater business. It means the better understanding of our own business, our better ability to teach those who are going to market for the things we have to market.

A DELEGATE: We today constantly measure what we ought to do merely from the improvement over the past. It has been my experience in business that one of the greatest weaknesses of the organization is the fact that we have no standard by which to measure the wastes that occur. The engineer when he is measuring the unit has a theoretical capacity, and he readily notes the improvement over the past. Now we do not measure wastes, and probably the total waste is greater in our dealings with the human being. I wish we did not pay quite so much attention to the small improvements we get over the past.

The Chairman: I had five years' experience in selecting, training and assigning salesmen, and I have made a record of having 94 per cent of those men successful salesmen. Nobody else is able to supply figures anywhere near it. So long as I have obtained that record and held it, I am entitled to my opinion of what percentage is given to training.

A Delegate: Did you have the same standards?

The Chairman: During the five years, yes.

A Delegate: I want to say just one word in regard to that 1 per cent training, and that is that in speaking of personality and ability as being so much more important we may overlook the fact that a college man (and those were the men you had in your schools) is already a trained man, and that he has had a good many years of either direct or indirect training for his work. Therefore, if he has the general capacity and ability for salesmanship, the little additional training he would get might not be so evident in his work, whereas many of us have to deal with minds that have not been trained at all or but a very little, so that a college trained man may be, and in fact ought to be, very much more capable.

The Chairman: The men that do the best jobs in any way that we care to measure them would never be called upon to discuss the marks they gave different students, for they would always be very close to whatever marks the director assigned. We never could catch them; they had fine ideas about all these subjects. But they could not go out and sell anything—that is the trouble with the scheme. Now we had other men who never saw this scheme—we could not keep them in a class room, they did not care anything about it—but they would go out and sell more stuff. If the result of this training in getting men in that way is in keeping, and as a consequence, they are enabled to go out and sell, and sell above the average, then it is fine, but it does not work out that way.

I have in mind one star salesman who is the best of 350. He is also selling electrical material, but if he knows that anybody is coming to tell him anything about the product he is expected to sell (this is the custom with electrical people for representatives to tell the salesmen more about the product, or tell them the same thing over and over again, or tell them about a new development), this particular star salesman will not stay in the room. He will go out and dispose of his goods. His manager will ask him, plead with him, saying: "We have invited this factory representative to come here and talk to the salesmen, and here you are planning to be away. It is quite embarrassing, not only to me but also to the factory representative we have asked to call." This is his reply: "I am hired to sell goods—my income depends upon the amount of the volume of business that I secure for this company. If my job is to sit down and listen to people talk I will be very glad to do so, but if it is to sell goods I am going out and sell goods." And he sells more goods than anyone else in the whole 350 scattered all over the country.

That is only one example, and there are numbers of others. If we could only find out just what that fellow does and how he does it, we might be able to instruct others to do the same thing equally well. In this way we would be getting somewhere on this training, but I have not found anything of worth yet.

A DELEGATE: My experience has only been in lines where the person had genius for the work. It does not make any difference whether they have the training or not, apparently, but for the average person you will find that the training is of value. My experience is very, very small in this particular line of work, so I do not like to give it, but we have been working with a little group for the last few months where the rating was not known to the people of the Education Department until after all tests and marks had been given, and there were only two marked discrepancies between them—only two cases in which we found that the records were very much at variance. In one case we are very sure that the girls were wrong; in the other cases there has been some reason for a definite falling off. There used to be the same expert salesmanship that is now lacking, which would be indicated by the student. Good students, as a rule, were good salesmen.

A DELEGATE: Do you pay any attention to the health rule?

THE CHAIRMAN: No.

A DELEGATE: Why not?

THE CHAIRMAN: There is no reason we should not, but I am not in a position to say. We would only take those who looked healthy.

A Delegate: The quality of health was omitted from the qualities which you mentioned earlier in the evening, and it seems to me that it is second only to the matter of honesty. I think the time is coming when every employe., temporary or permanent, before he is allowed into the factory must be examined, because we realize that the amount we invest in his training is simply wasted if we are dealing with a person whose health is below the average. The cost of the examination is nothing compared to the cost of the other dangers.

A Delegate: Do you allow a sick benefit to your employes?

A Delegate: Yes, but I have forgotten what it is.

A Delegate: If you do not examine your applicants for positions you will find that your expenses for sick allowances will perhaps go higher than they would otherwise.

The Chairman: It really should be done.

The Chairman: Any other questions to be discussed? If not I would like to state that there is a plan in use in Cornell University to train the professors in teaching engineering, or whatever they may be teaching. As I understand it, they hold classes and develop a series of points on which to mark each other. They all agree on what these points should be, and then the professor, one professor who is elected for the day, will come in and go through his lecture, illustrating how he teaches some particular topic. They are all marking him as he goes along, deciding whether he knows anything about the subject, whether or not he is presenting it in a way that students would understand it, and whether it is done in an entertaining way. He is given a percentage mark, and next week another professor is called upon to give a demonstration. So apparently there must be some merit in the plan, or they would not be using it in Cornell.

A Delegate: That plan is used also in the University of Pennsylvania.

The Chairman: How long has it been used?

A Delegate: I think two years at least, but I know it is being used this year.

A Delegate: That plan has been introduced in Cleveland with the engineering students, in educating students for all courses, and every professor who comes in contact with the student, at the end of each semester has to give his conception of that man. The professor is supposed to talk to the man privately at the end of each semester. The strange thing about it is that he gives his opinions out more or less confidentially, and the boys go right out into the hall and discuss them all around.

THE CHAIRMAN: It is my experience that they do not seem to care about the private discussion; they want everybody to know about it.

A DELEGATE: I have not heard anybody say anything about character analysis in selecting salesmen.

THE CHAIRMAN: Anyone care to discuss this subject of character analysis in the selection of salesmen?

A DELEGATE: I think not. It is getting late and I move that we adjourn.

A DELEGATE: Second the motion.

THE CHAIRMAN: It has been moved and seconded that we adjourn until next year.

COMMITTEE ON EMPLOYMENT PLANS

Mr. C. R. JOHNSON, *Chairman*
GOODYEAR TIRE AND RUBBER COMPANY
Akron, Ohio

Mr. N. F. DOUGHERTY
THE PENNSYLVANIA RAILROAD COMPANY
515 Lloyd Street, Pittsburgh, Pennsylvania

Mr. W. M. SKIFF
NATIONAL LAMP WORKS, GENERAL ELECTRIC COMPANY
Nela Park, Cleveland, Ohio

Mr. F. D. FRENCH
AMERICAN MULTIGRAPH SALES COMPANY
Cleveland, Ohio

THURSDAY—AFTERNOON SESSION

EMPLOYMENT PLANS

THURSDAY AFTERNOON, JUNE 10, 1915

VICE-PRESIDENT JOHN McLEOD, Presiding

THE CHAIRMAN: The meeting will please come to order. We will now have the report of the Committee on Employment Plans by Mr. Johnson, the Chairman.

MR. C. R. JOHNSON (Goodyear Tire and Rubber Company):

A question might well be asked concerning the place of the discussion of the employment question in the proceedings of this Association. Inasmuch as the Association is endeavoring in a broad way to promote the means for increasing the individual efficiency of the employe, the subject of employment, with its corollaries of physical examination and promotion, properly belong among the efforts of this Association. Unless individuals are properly placed in their daily work it is impossible for the highest efficiency to be obtained.

Your committee at its first meeting of organization found a very fortunate division of interest in the members of the committee, with the result that the work of the committee was divided as follows:

Mr. F. D. French, American Multigraph Sales Company, considered the employment problem from the sales standpoint; Mr. W. M. Skiff, of the National Electric Lamp Works, considered the matter from the standpoint of technical and clerical help, and Mr. N. F. Dougherty, of the Pennsylvania Railroad Company, and Mr. C. R. Johnson, of the Goodyear Tire and Rubber Company, undertook the field composed of skilled and unskilled labor. Each member of the committee was therefore well qualified by experience in each particular field and endeavored to draw up a set of questions for the general questionaire which would afford the Association information of value on these subjects. The committee wishes to commend the American Multigraph Sales Company for allowing Mr. French to continue as a member of the committee in order to complete the work after having withdrawn from the Association.

Upon the return of the questionaire each member of the committee undertook special study of the questions which had been answered. Working independently the members of the committee arrived at the conclusion that it was not possible to draw dependable deductions from the answers to the questions and that greater good would result if this material could be rearranged in a form which could be more easily studied by those interested in the subject. Consequently, the report was arranged in that manner and sent out in advance of the Convention and in accordance with the plan of the Executive Committee. No attempt was made to include recommendations in this advance copy. It was felt by each member of the committee that the real value of these questions and answers lay in the fact that they contained information concerning many angles of the question which could be studied along the particular channel which interested the inquirer. Frankly, the questionaire method has not been regarded by our committee as successful from the standpoint of securing data on this subject. Many of the questionaires themselves appeared to come from those who had only general knowledge on the subject. The committee is not prepared to say that this record was not the best obtainable from the questionaire method. Undoubtedly the questionaire has been largely overdone and does not secure attention from busy men. At the same time the committee recommends to all interested in the subject of employment, physical examination and promotion, the careful study of these questions and much information can in that way be secured.

An examination of some of the more pointed questions from the questionaire has resulted in the following observations which are of interest.

43. Have you an employment bureau? If so, how organized? Out of the 50 answers received 1 did not answer, 32 had employment bureaus and 17 had none.

The impression gained from this question is that the importance of a specially organized employment department has not yet been realized by many corporations and many that do have them are in such a form of organization that an examination and later specialization would result in improvement.

44. What are your labor engagement methods? Do you advertise? Employ outside agencies? Do you use printed application blanks?

Examination of this question shows that in the majority of cases the outside employment agency is not favorably looked upon by corporations and this is undoubtedly due to the fact that corporations have had an unfavorable experience with the majority of these agencies since they are not interested in the corporation, nor the applicant, but only in the fee which they secure.

46. Do you keep personal records? 4 did not answer; 41 yes, 5 no; which indicates that the importance of records of employes is realized by most corporations, although this statement should be qualified because of the fact that the detail of the extent of these records is not made plain by the answers.

47. Is a study made of the personal characteristics of each employe—health and physical characteristics, intellectual ability, manual ability, attention, memory, type of activity, leadership, etc. To this question 24 answered yes, 22 no.

51. How do you acquaint your employes with opportunities for promotion?

This question revealed no particular plans with any of the corporations. The important thought brought out was that the employes can see that opportunities exist when employes in their midst are promoted for good work.

52. Do trade unions affect your gradation of laborers and their advancement? To this question 5 answered yes, 41 no.

56. What are your methods of discharge and in whom does the power of discharge originate and where is the power of final discharge lodged?

Of the answers given, 9 showed the power of final discharge resting with the Employment Manager and practically all of the companies offered protection to the employe from the petty boss by the opportunity for an appeal to higher authorities.

59. Do you investigate references? 38 yes, 3 no.

60. What is the experience history of the man whom you have to make the selection of prospective employes?

Trained inside the business, 19. No employment man, 9.

Trained outside the business, 9. Did not answer, 13.

The significant point brought out with this question was that several corporations have shown their realization of the importance of the employment question by virtue of the caliber of men whom they had employed for this work.

63. Name the causes which you feel are responsible for floaters.

A number of reasons have been given in answer to this question including intemperance, lack of education, lack of home ties, discontented mind, restlessness due to poor placement, seasonality of many industries, but it is rather significant that none of the parties answering the question lay broad stress on the subdivision of labor as a cause for the floater. The extremely narrow specialization which has come with modern industry is to a large degree responsible for the desire of the employe for a change, and furthermore the ease with which new tasks can be taken up by virtue of this specialization is in itself a cause for the floater.

127. Does your company employ physicians for the examination of officers and employes?

Did not answer, 2. Yes, 27. No, 21.

The answers to this question indicate considerable growth in the matter of physical examination inasmuch as several years ago this was pretty largely confined to the railroads and insurance companies.

128. Does your physician make all examinations?

Did not answer, 15. Yes, 26. No, 9.

137. What per cent. of the men you examine do you reject?

Most of the rejections ran below one per cent. but the railroad companies and the insurance companies show a higher percentage, which is no doubt due to the higher standard necessary because of the nature of the work.

139. How compulsory are your recommendations to the employes who need trusses, glasses, or to take some definite steps for physical betterment?

Did not answer, 19. Compulsory, 18. Not compulsory, 13.

For one to say that employment properly done is a "cure-all" for the labor problem is narrow and conceited. Proper employment methods are necessary to a well-balanced and efficient organization, but economic forces operating in business are far too powerful in affecting labor conditions to enable an employment system, no matter how efficient, to prevail in its effects. This is well substantiated by the experience of many industrial corporations during the year 1914 in which it has been found that employes have stayed with their work far better than in years of prosperity. The reason is plain: more men than jobs and it should be emphatically pointed out that the law of supply and demand is as powerful in labor matters as in material things. Some have claimed through special employment methods and through the application of scientific character analysis to have reduced the labor turnover to a negligible quantity.. An investigation of the facts in these cases would reveal that along with these scientific methods there has been steady employment offered and a wage more attractive than nearby industries offered. In other words credit should be given where credit is due in matters of this kind. It is an unfortunate thing that individuals with pet ideas concerning this subject and many allied questions are prone to measure results of the application of their ideas without due regard to other operating factors. To the student of these questions little credit is therefore given to these assertions.

It is recommended to each corporation to make a searching inward examination of its employment methods. Such examination cannot fail to bear good results. The company which I represent, Goodyear Tire and Rubber Company, Akron, Ohio, made such an examination several years ago with the result that their entire employment system was re-organized.

The important thing to be secured in this reorganization is a man to be put in charge of the employment work. He should thoroughly understand the needs of the business, he must be thorough in his understanding of human nature, and, last but not least, he must have high ideals concerning the importance of employment to his employer. These ideals should keep him constantly striving for better results in employment work.

This committee has only one recommendation to make to the Executive Committee of the Association. In its work during the past year the committee has made only a preliminary survey of this question. It is evident from the questionaires that there are a representative number of corporations that have the matter of employment and physical examination well in hand. It is evident to the committee that little further progress can be made through correspondence. The committee therefore recommends that the Executive Committee arrange, if possible, for an investigation on the ground of the employment methods of such concerns as have shown by their answers to the questionaire that their employment methods have been given careful consideration. Such an investigation, followed by the development of a composite plan including the best ideas of each corporation, would provide for the members of the Association and the business world in general a standard employment plan. Of course this plan could not be bodily adopted by each and every corporation but would form an excellent basis upon which each corporation could apply a plan of operation to fit its needs.

Respectfully submitted,

C. R. JOHNSON, *Chairman.*

QUESTIONAIRE ON EDUCATIONAL AND EMPLOYMENT PLANS

The report of the Committee on

EMPLOYMENT PLANS AND PHYSICAL EXAMINATION

is presented in three divisions:

SALES
Handled by Mr. F. D. French
TECHNICAL AND CLERICAL
Handled by Mr. W. M. Skiff
SKILLED AND UNSKILLED LABOR
Handled by Mr. C. R. Johnson and Mr. N. F. Dougherty

Each member of the Committee has rearranged and codified the material obtained through the questionaire in such form as he feels will best convey the information to the Association.

QUESTIONAIRE ON EDUCATIONAL AND EMPLOYMENT PLANS

EMPLOYMENT, OFFICE AND TECHNICAL DIVISIONS ANALYSIS AND SUMMARY OF THE RETURNED QUESTIONAIRES

This division includes questions No. 79 to 97 so arranged as to permit of their being answered "yes" or "no." Of the total number of companies to which the questionaires were sent, 38 answered a part or all of the questions and 11 returned the blanks unmarked. In the following the affirmative and negative replies are expressed in per cent of 38, the total number of companies furnishing replies.

Questions

Do you consider it important to obtain information on the following subjects in order to determine the applicant's fitness for the work at hand, and in order to grade individuals on various qualifications for the purpose of comparison?

	Replied Affirmatively		Replied Negatively		Rating in order of per cent Affirm.
	Number	Percentage	Number	Percentage	
79—Married or single	35	92.	3	8.	4
80—Age	37	97.	1	3.	2
81—Weight	22	58.	16	42.	14
82—Height	21	55.	17	45.	15
83—Complexion	7	18.	28	74.	24
(a) Color of eyes	3	8.	32	84.	25
84—Texture	8	21.	25	66.	23
85—Line of descent	14	37.	22	58.	19
86—Home environment	21	55.	15	40.	15a
87—Parental supervision	21	55.	14	37.	15b
88—Scholastic education	34	89.	3	8.	5
(a) Scholastic standing	23	60.	9	24.	13
(b) Natural aptitude as indicated by preference to various subjects studied	25	66.	8	21.	12

	Replied Affirmatively		Replied Negatively		Rating in order of per cent Affirm.
	Number	Percentage	Number	Percentage	
89—Previous employment	38	100.	..	..	1
(a) Names of employers..	37	97.	..	..	2a
(b) How obtained	15	39.	17	45.	18
(c) Duration of employment	36	94.	1	3.	3
(d) Nature of work.......	36	94.	1	3.	3a
(e) Working hours	14	37.	20	53.	19a
(f) Remuneration	30	79.	6	16.	9
(g) Reasons for leaving...	35	92.	2	5.	4a
(h) References	35	92.	2	5.	4b
(i) Do you look them up?	32	84.	4	11.	7
90—Financial Obligations	14	37.	15	40.	19b
(a) Reason for debt, if any	14	37.	19	50.	19c
(b) Plans for meeting financial obligations	11	29.	22	58.	21
91—Social standing	11	29.	22	58.	21a
(a) Church	12	32.	21	55.	20
(b) Clubs	9	24.	23	60.	22
(c) Societies	12	32.	22	58.	20a
(d) Progress made in above	8	21.	23	61.	23a
92—Health	32	84.	2	5.	7a
(a) Past	29	76.	6	16.	10
(b) Present	32	84.	2	5.	7b
(c) Athletic diversions	8	21.	26	68.	23b
(d) Physical examination..	17	45.	16	42.	17
(Extent considered Necessary)					

Information given by seven companies as follows:

1. Examination to determine chronic and contagious diseases.
2. Examination for eyesight, contagious diseases, and general health, depending upon the position to be filled.
3. Examination after 30 days and before 60 days.
4. Examination, extent necessary, Very thorough.
5. Examination, extent necessary, Thorough.
6. Physical examination, extent considered necessary.
   Health, eyes, teeth, throat.
7. See form M-D 358.

Two of the firms referred, for information, to physical examination report blanks attached to questionaire, but neither of these was received.

93—Habits	23	60.	1	3.	13a
(a) Drinking	33	87.	3	8.	6
(b) Smoking	17	45.	13	34.	17a

One company expressed the opinion that this question should be considered only in connection with promotion of employes.

One company considered information on 93b necessary only as regards the use of cigarettes.

One company considered information on 93b necessary only when the applicant is under 18 years of age.

94—Ultimate aims	20	53.	3	8.	16
(a) Definite desires	27	71.	6	16.	11
(b) Definite plans for progression	23	60.	9	24.	13b

One company expressed the opinion that this question should be considered only in connection with promotion of employes.

95—Ideas as to the relative importance of money in comparison with other things	22	58.	12	32.	14a
96—Mental attitude towards advancement	31	82.	4	10.	8
97—Qualifications for clearly defined position	32	84.	2	5.	7c

About what other subjects would you suggest information be obtained?

Suggestions were made as to other items on which information should be obtained as follows:

By one company:

I. Has he initiative?
II. Can he write good reports as judged by style and English?
III. Has he system?
IV. Is he orderly and particular about his work?
V. Does he show respect for his superiors or is he familiar with them?
VI. Does he think?

By another company:

I. Does the applicant have relatives in the employ of the company?
II. What church does he attend?
III. Has he been discharged from any position?
  a. When?
  b. Why?
IV. Has he passed physical examination and when?
V. Does he object to physical examination?
VI. The name of the family doctor?

QUESTIONAIRE ON EMPLOYMENT PLANS AND PHYSICAL EXAMINATION

DIVISION OF SKILLED AND UNSKILLED LABOR

In order to determine the weight of opinion on each of the questions, the answers to the questionaire from each company have been recast under the question head in the following sheets. Each company has been assigned a number:

KEY TO COMPANIES ANSWERING QUESTIONAIRES

1. Woodwork Manufacturers.
2. Specialty Manufacturers.
3. Typewriter Manufacturers.
4. Insurance Company.
5. Locomotive Company.
6. Woolen Manufacturers.
7. Automobile Manufacturers.
8. Railroad.
9. Hardware Manufacturers.
10. Electric Manufacturers.
11. Hardware Manufacturers.
12. Public Service Company.
13. Retailers.
14. Manufacturers of Novelties.
15. Manufacturers of Toilet Supplies.
16. Railroad.
17. Manufacturers of Women's Apparel.
18. Manufacturer of Machinery and Tools.
19. Manufacturer of Electric Machinery.
20. Manufacturer of Machinery.
21. Public Service Company.
22. Marine Constructions.
23. Printers and Bookbinders.
24. Public Service Company.
25. Printers and Bookbinders.
26. Manufacturers of Electrical Appliances.
27. Manufacturer of Machinery.
28. Manufacturing Company.
29. Printers and Publishers.

30. Public Service Company.
31. Manufacturer of Machinery.
32. Public Service Company.
33. Railroad.
34. Manufacturer of Women's Apparel.
35. Publishers.
36. Manufacturers of Electrical Apparatus.
37. Trade Schools.
38. Automobile Manufacturers.
39. Metal Manufacturers.
40. Railroad.
41. Railroad.
42. Insurance Company.
43. Retailers.
44. Manufacturers.
45. Insurance Company.
46. Manufacturers.
47. Manufacturers of Women's Apparel.
48. Manufacturers of Electrical Apparatus.
49. Specialty Manufacturers.
50. Retailers.

Immediately following will be found a summary of the weight of opinion on such questions as can be summarized. Following this summary is a complete outline of the answers given by each of the fifty companies previously listed.

Attention is called to the number of special points in the various companies' Employment Plans which merit attention. Several companies have shown by the caliber of the men employed, men of considerable experience in affairs, that the matter of employment has become of great weight to them. A large number of companies, to protect an employe from the action of the petty boss, invest the authority for final discharge in their employment department.

Several companies have followed the plan of keeping an envelope or jacket for each employe on file and in that is placed the employment record card and all matters of information bearing on that employe. This seems to be a very good plan, since it provides a central file for all employe matters.

One railroad company reports, as punishment for mistakes, a system of merits and demerits for their ordinary employes instead of lay-offs. Each employe has access to his record and knows that if his demerits too far outnumber his merits he will be removed from the company.

Question No. 43

Have you an employment bureau? If so, how organized?

Did not answer, 1; Yes, 32; No, 17.

Question No. 44

What are your labor engagement methods? Do you advertise? Employ outside agencies? Do you use printed application blanks?

Did not answer, 4; Yes, 21; No, 25.

Question No. 46

Do you keep personal records?

Did not answer, 4; Yes, 41; No, 5.

Question No. 47

Is a study made of the personal characteristics of each employe—health and physical characteristics, intellectual ability, manual ability, attention, memory, type of activity, leadership, etc.?

Did not answer, 4; Yes, 24; No, 22.

Question No. 52

Do trade unions affect your gradation of laborers and their advancement?

Did not answer, 4; Yes, 5; No, 41.

Question No. 53

What are your methods of remuneration?

Piecework	9	Daywork and bonus	7
Salary	1	Piecework and bonus	6
Daywork and piecework	4	Daywork	8
Salary and commission	1	Did not answer	14

Question No. 59

Do you investigate references?

Did not answer, 9; Yes, 38; No, 3.

Question No. 60

What is the experience history of the man whom you have to make the selection of prospective employes?

Trained inside business	19	Trained outside business	9
No employment man	9	Did not answer	13

Question No. 65

What provision have you for the appeal of a workman from the decision of the boss?

Did not answer, 13; Yes, 34; No, 3.

Question No. 117

Is your plant equipped with sanitary water closets, urinals, wash rooms and shower baths?

Did not answer, 4; Yes, 43; No, 3.

Question No. 118

Do you insist upon maintenance of neat and clean conditions in and about your yards and buildings?

Did not answer, 4; Yes, 46; No, —.

Question No. 119

Do you maintain proper light and ventilation, not only in your plants, but also in your offices?

Did not answer, 4; Yes, 45; No, 1.

Question No. 121

Have you made any change in your method of treating injured employes since the passage of the Compensation Law in your State?

Did not answer, 9; Yes, 2; No, 39.

Question No. 124

Do you attempt to exercise any supervision over employes' food in plant or at home?

Did not answer, 4; Yes, 15; No, 31.

Question No. 125

Do you attempt in any way to inculcate in the minds of your employes that "good health makes for better efficiency?"

Did not answer, 6; Yes, 33; No, 11.

QUESTION No. 127

Does your company employ physicians for the examination of officers and employes?

Did not answer, 2; Yes, 27; No, 21.

QUESTION No. 128

If so, does your physician make all examinations?

Did not answer, 15; Yes, 26; No, 9.

QUESTION No. 129

If not, are the certificates of private physicians accepted?

Did not answer, 20; Yes, 4; No, 26.

QUESTION No. 130

Are company physicians allowed to have private practice among employes?

Did not answer, 13; Yes, 23; No, 14.

QUESTION No. 131

Are all persons entering your services given a physical examination and are physical examinations made at stated periods?

Did not answer, 2; Yes, 23; No, 25.

QUESTION No. 133

Do you employ a trained nurse?

Did not answer, 3; Yes, 31; No, 16.

QUESTION No. 139

How compulsory are your recommendations to the employes who need trusses, glasses, or to take some definite steps for their physical betterment?

Did not answer, 19; Compulsory, 18; Not compulsory, 13.

QUESTION No. 140

Do you carry on systematic follow-up work to see if your recommendations are carried out?

Did not answer, 22; Yes, 24; No, 4.

QUESTION No. 141

What is the attitude of your employes toward the physical examination?

Did not answer, 26; Good, 21; Bad, 3.

Question No. 142

Are your employes kept under records?

Did not answer, 7; Yes, 36; No, 7.

Question No. 145

Are they valuable?

Did not answer, 12; Yes, 35; No, 3.

Question No. 146

Have you any executive or committee to keep these, supervise them and pass upon promotional merit of employes therefrom?

Did not answer, 13; Yes, 21; No, 16.

COMPLETE OUTLINE OF ANSWERS TO QUESTIONS 43-66 INCLUSIVE AND 117-146 INCLUSIVE

No. 43

Have you an employment bureau? If so, how organized?

1. Yes. One man.
2. Yes. Employment department is being reorganized, the new organization to comprehend standardization of both employment and salaries on matters relating to employment, transfer, discharge, promotion, lay-offs and reinstatements, and the keeping of efficiency records of each employe, the responsibility of all being placed under one head.
3. Yes. Manager and two assistants.
4. For home office employes. See article prepared for publication in bulletin of The N. A. C. S.
5. Each of our plants has an employment office in charge of a clerk. His duties are to receive and record all applications for positions and to select new employes for vacant places.
6. Yes. Organized under the factory superintendent.
7. Yes. Employment manager and several assistants.
8. No.
9. Yes.
10. Each department head does its employing.
11. No.
12. No.

13. No.
14. Yes. Manager and clerical assistant.
15. Yes. Factory employment department is organized on Dr. Katherine M. H. Blackford's plan, using her science of character analysis by the observational method as a basis. A trained specialist is employed who devotes entire time to matters affecting the personnel of the organization.
16. Yes. For the operating department. Organization consists of one central office located at Baltimore. All applications for skilled or classified positions are sent by various employing officials where investigation is made and applications finally approved or rejected. The employment of the applicant is considered temporarily pending final action.
17. Yes. One man keeps full records of all applicants and employes and those who leave. Also does the advertising for labor.
18. Yes. Carried on informally by the superintendent.
19. Yes. But each department head interviews and hires his own men.
20. This is taken care of by a man in charge of Cost Department.
21. Yes. Employment clerk hires all factory help as requisitioned by heads of departments.
22. No.
23. No.
24. Yes. Organized to inspect applicants, take applications and keep records. Final decision left to department head, subject to recommendation of medical department.
25. No. The school hires all boys and our superintendent hires adults.
26. Yes. Consists of an employment man who upon receipt of requisition for employes from the department heads, which requisition gives the basic requirements for the position. The detail is handled by a clerk who keeps the employment file.
27. ——
28. (a) Yes. (b) The employment bureau is in charge of a man who is thoroughly familiar with all the phases of the various operations, and who is directly responsible to the manager of the Labor Department.
29. An employment division in charge of the manager of the

employment department, which is composed of four divisions, Employment, Welfare, Health, and Instruction.

30. Yes. The staff of the employment bureau is as follows:

    * Superintendent employment bureau,
    Chief clerk,
    Company physician and assistant,
    Visiting nurse,
    Three clerks,
    Two stenographers,
    One typist,
    One office boy.

    This force takes care of the variety of other duties in addition to the routine work of the employment bureau.
31. Yes. In charge of General Foreman.
32. No—but at the present time we have such a scheme under advisement.
33. Yes,—it is handled by the General Office.
34. General Manager employs all factory help. Credit Man employs all office help. Firm employs salesmen.
35. No.
36. Assistant Superintendent in charge and as many employment clerks as required—Stenographer—File Clerk—Errand boys —Interpreter when business justifies.
37. No.
38. Yes. This department hires, transfers from department to department, lays off and discharges employes.
39. A separate employment bureau is maintained at each plant, under control of the General Superintendent of the plant. Each employment bureau is in charge of an employment agent, with necessary clerks and interpreters.
40. No. We should have one.
41. No.
42. We have an employment bureau in charge of a superintendent.
43. Yes.
44. No. Employment is under the direction of superintendent in the factory and an assigned office man in the office.
45. Yes, handled by the assistant secretary's office.
46. No.

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* Is also Secretary of the Advisory Committee.

47. We have a bureau, in charge of an employment superintendent who is assisted by several clerks covering the routine work.

48. Yes,—entitled Labor and Educational Division. The head of this department has assistant. Reports direct to general manager. Employs all factory and office help.

    Interviewing—judge personality. Investigate character. Find out if steady and reliable. Get references for important positions. Send to head of department for interview, if qualified for position.

    Employing—explain working hours, rate paid to begin with, and maximum rate that can be made (if piecework). Find out if previously employed and get references as to ability and general reliability. Doctor's examination.

    Assisting employes—keep list of houses and rooms "for rent" for convenience of employes. Assist those who have been employed from out of the city, to get located. Investigate cases where an injustice is claimed to have been done. Recommend adjustment of rates where necessary.

    Promotion, transfer, discharge—keep record of those eligible for transfer and promotion. If possible, fill important positions by promotion from the rank and file. Encourage young men to attend night school and qualify for promotions. Make investigations and discharge employes who are undesirable.

    Object—to get efficient employes, results in improved product, increased sales. The more we sell the more good we do.

49. Yes; employment agent and assistant.

50. Store superintendent is in charge. Personal interviews with applicants are required. A printed application card is filled out and filed for future reference should vacancies occur. The applications are cross filed under the name of the applicant and the position desired.

No. 44

What are your labor engagement methods? Do you advertise? Employ outside agencies? Do you use printed application blanks?

1. Do not advertise except in emergency. Very seldom.
2. All labor is to be engaged through our employment depart-

ment, where questions are asked, tests made, and applications filed.

3. Manufacturers' Association. Manufacturers' Association keeps file of all working men in the city connected with the shop, and their recommendations are given to us when applicant applies for work.
4. No advertisement. No outside agencies. We use printed application blanks. (Copy enclosed.)
5. It has never been necessary for us to advertise for help or to depend upon outside agencies to meet the needs of normal business. See application blank attached, showing questions asked.
6. Very rarely advertise. Never employ outside agencies, except that we co-operate with the local Bureau of Associated Charities. We expect to carry on a simple conversation regarding their experience, the kind of work which is to be done, etc. Use printed application blanks.
7. Questions that relate to experience and personal history. Method is: 1, write application; 2, we investigate applicant and file record; 3, foreman requests help; 4, we search file and send for likely applicant, who meets the foreman; if satisfactory, applicant is taken to the time office for recording.
8. Santa Fe does not advertise for help. We are educating enough skilled help. Common laborers are always plentiful.
9. Yes. All kinds.
10. ——
11. Labor is usually hired as needed. Applications are kept on file.
12. We do not advertise or use agencies. We have more applicants than we can use. Shop superintendent interviews applicants personally and induces them to talk. The likely ones are selected and given work which is probationary. Applicants fill out form of application (see form); we always write for references.
13. Applications are filed daily from those above the average applying for position. From time to time advertise in the daily papers and then make the best selection possible. We use a printed application blank. (Sample herewith.)
14. Every applicant fills out an application for employment and

is then interviewed by the employment manager. (Sample blank enclosed.)

15. We rarely advertise for help. Occasionally the local State employment bureau and the employers' association are called upon. An application file is maintained and classified according to occupation. This file is depended upon to supply all help needed. Printed blanks are filled out by the applicant. Questions asked cover name, address, date of birth, nationality, education, height, weight, marital state, dependents, rate of pay expected and record of business, etc. Applicants are interviewed during forenoon. Each applicant studied as to fitness for particular lines of work.
16. Have a central labor agency at Baltimore and when conditions warrant, have sub-agencies at various large cities along the line. Sometimes have secured assistance of outside agencies. Most of the men hired through labor agencies are for unskilled positions, and in these cases no set questions are asked; however, the men are required to pass a physical examination. Application blanks are not exacted for unskilled men.
17. We advertise or send a representative of our plant to the place where labor is plentiful. We use printed application blanks.
18. Men apply in person or by letter. We seldom advertise. The R. I. branch of the National Metal Trades Association keeps their record of men and helps us when we are in need of more help. No regular questions. No application blanks.
19. (a) Personal interview in the majority of cases. (b) Sometimes, emergency. (c) No. (d) There is no set of standardized question. (e) No.
20. By having talked with applicant. We advertise and get applicants from several employment agencies, chiefly the Metal Trades Association.
21. Advertise when help is not obtainable, otherwise we do not employ outside agencies. We use a regular printed application blank.
22. No particular form. We usually do this through our own agents and special representatives.

23. Advertise for office men. Factory men we get from union office. General questions asked. No blanks.
24. We usually have sufficient applicants. Advertise occasionally, and occasionally apply to free employment agencies. Printed application blanks are used.
25. We advertise and co-operate with all organizations, both private and public in selecting boys. (See blanks enclosed.) We obtain adults by advertising through personal applications.
26. We occasionally employ outside agencies. For the better class of help, the best agency is the Y. M. C. A. For laborers and general factory help we have the best results from advertising, as in that way we often have a large number of applicants from which the best man can be ascertained in a short time. Our general experience with employment agencies is that they do not take pains to select the man best suited for the position, but send almost anyone who has an application filed with them. The questions asked employes when they are starting are in regard to their health, previous experience, place of residence. An applicant for a stenographic position would be required to take dictation and write it on the machine, or an applicant for an assembling position would be asked to work at the regular job for a few hours. If unsatisfactory at the end of that time, he would be paid his hourly rate for the time which he had worked, and if satisfactory would be employed. We use printed application blanks.
27. ——
28. Talking to prospective employes, asking questions, pertaining to past experience, etc. Yes, we advertise for men. No outside agencies. Questions asked: Name, age, married or single, former employers, how long worked, references, etc. Yes, for those making application by letter.
29. The employment division maintains a classified filed application. These cover phases of the company's activities and it is usually possible to fill requisitions for employes from this file. If this means fails, applicants are obtained by advertising or from the outside employment agencies. Specimens of our application blanks are attached.
30. Applicants are received in the employment bureau every

morning from 8.30 A. M. to 12.30 P. M. A list of available applicants is also built up by advertising in the daily papers and technical magazines. Outside employment agencies are occasionally drawn upon and we also work in close co-operation with the employment bureaus of various educational institutions. Printed application blank (exhibit A enclosed) must be filled out by every applicant prior to the interview. The applicant is then received at the interviewer's desk and engaged in a friendly conversation, during which he is given an informal examination as to his experience, qualification, etc. The questions are varied in accordance with the position for which the applicant is applying and are designed not to analyze his fitness for the particular task, but to enable interviewer to form a definite opinion as to the applicant's general character. In certain classes of work further technical tests are made to determine the applicant's fitness. For additional details and answer to this question, see attached copy of lecture (exhibit B) prepared for the Alexander Hamilton Institute by our superintendent of employment.

31. Advertise occasionally. Never employ outside agencies. Use printed application blanks. Most men are hired by presenting themselves at the employment bureau for personal observation.

32. Different methods in different departments. We would advertise if necessary or employ other agencies. We use printed application blanks.

33. We have printed application blanks.

34. Methods: Friends of present employes. Advertise. Agencies, such as employment agencies.
Questions: Previous place of employment. Length of service. Amount of experience. Reason for leaving.

35. Advertise for some and use agencies.

36. Advertise in daily papers in centers where the classes of help desired are located. Send representatives to labor centers when necessary. (See Exhibit II for questions.)

37. We use application blanks (sample attached). We always have more applicants than we can accommodate.

38. By personal interviews. No. Employers' Association only. Depends on position to be filled. No.

39. Under normal conditions sufficient men apply to the employment bureau. When labor is scarce, we have, at times, employed outside agencies. We use printed application blanks. Copy attached.

40. Hit and miss. Labor agencies for day labor. We use printed application blanks in some departments. The system is very poor.

41. We do not advertise or employ outside agencies as a rule. Applicants are questioned as to their habits, family relations, references, previous employment, etc. We use printed application blanks.

42. We advertise occasionally. Employ outside agencies occasionally. Ordinary questions necessary to find out character and experience. Use printed application blanks, copy attached.

43. ——

44. Do you advertise? No. Employ outside agencies? Yes. Do you use printed application blanks? Yes.

45. Yes, at times we advertise. No, we do not employ outside agencies. Yes, we use printed application blanks. The application blank covers most of the usual questions.

46. Our men are engaged by the heads of the various departments. No, we do not advertise generally. We do not employ outside agencies. The questions vary according to the department hiring. Yes, we use printed application blanks.

47. Very seldom find it necessary to advertise. Sometimes we employ outside agencies for typists. We use a printed application form which contains practically all the questions asked, aside from specialized tests which are given on practically all classes of work.

48. Questions: (a) ———. (b) Yes. (c) Seldom. (d) Ask name, age, single or married, living with parents, if single, if not, why; schooling, previous employment, earnings, prefer day work or piecework, ambition, attending night school or taking correspondence course, and others as may seem necessary.

49. Most applicants are engaged through personal interview and very rarely find it necessary to advertise. Applicants are frequently sent to us by Employers' Association. For ques-

tions asked, see Employes' Record Card, form 394. Application blanks not generally used.

50. We seldom need to advertise or employ outside agencies. We use printed blanks.

No. 45

What are your methods of trying out men?

1. ——
2. Men in the factory are tried out on the particular job for which they have applied, under the foreman.
3. No special methods, as Hartford has many skilled men in our line.
4. No special methods.
5. We have no special methods. Men are assigned work and given necessary instructions. If they fail to make good, they are given other work or let go.
6. People in the schools are followed up weekly while in the school, and until the stated month or two months of probation after graduation have passed. Other new employes are followed up for the first two weeks only.
7. Put them on the job and try them out.
8. No specific methods.
9. General.
10. ——
11. Put them to work, encourage them, and keep them if satisfactory.
12. Probation of a week or more before being sent to a school of instructions.
13. The work of all employes is observed closely. If not satisfactory, the poorest ones are weeded out.
14. We try to intelligently place men and the progress of new employes is followed by the employment manager for the first three months. If unsatisfactory, the employe is either transferred to another department or dropped.
15. We have no special methods of trying out men. We have been quite successful in selecting the right man for the job, so that a very small percentage fail to make good.
16. Men put to work and their skill and ability determined by observation of foreman.

17. Merely let foreman and superintendent watch them.
18. Put them to work and see what they can do.
19. If the man fits the job, there is no more to do; if he does not, he is usually shifted until he finds a suitable position.
20. No special method, except observation.
21. No special method. We endeavor to employ experienced men.
22. Depends upon employer and what job is to be filled.
23. Put to work.
24. Men are tried out in actual work.
25. We have no cut and dried methods.
26. Men are tried out by actual experience. As a rule, when employing a man, the situation is generally put up to him in such a way that only those who mean business will seek to keep the job. In this way we eliminate a large number of men who are looking for a snap.
27. ——
28. Putting them on a particular operation and following them up to see if they get proper instructions, and are adapted to the work.
29. They are tried out on the work for which they are employed.
30. (See exhibit "B," above referred to.)
31. By observation of the foreman under whom they are put to work.
32. Different methods in different departments. In the Sales Division men are shifted in an effort to find employment which is congenial and in which they are interested.
33. Try them out where we wish them to work.
34. The questions asked can only be answered properly by a person with experience, and a trial is given if in doubt.
35. Our individual records give us a pretty good line on a worker's ability.
36. Put him on the job which he represents himself able to do, under the foreman's observation. We don't expect a man to find himself at once—industry, manner, and other qualities are noted.
37. Place them as assistants, observe and check up their results.
38. No outlined methods. Methods governed by conditions.
39. It is the endeavor of the employment agent to send the

applicant to the proper department. He is then "tried out" by the superintendent or foreman in charge of the work.

40. Put them to work and "fire" them if they don't make good.
41. Putting them to work, and by observation and personal records of their service.
42. ——
43. Training school—while in school (about three weeks) men are on probation.
44. ——
45. Assigned to a department on trial until such time as the company sees fit to make employment permanent. Period of trial, thirty days to six months.
46. No special method.
47. Have no special methods excepting to put them to work and observe their progress.
48. Work and wages explained when employed,—keep in touch with employe and head of department for first few weeks, to see if proper progress is being made.
49. They are given necessary instructions and a reasonable length of time to get familiar with the work for which they were employed, and if found unsatisfactory are transferred to some other class of work or dismissed.
50. We simply put them to work and keep a close oversight on their work.

No. 46

Do you keep personal records?

1. Yes.
2. Yes.
3. Yes. See form 2.
4. Yes.
5. A record is kept on index cards showing name, age, nationality, and residence of each working man.
6. Yes.
7. File everything we have relating to employes.
8. Yes.
9. No.
10. ——
11. A few.

12. Yes.
13. Accurate records are kept of our sales people; of the amounts sold and the salary earned, and figured monthly into percentage.
14. Yes. These are kept by department heads.
15. Personal records are kept upon which the information submitted on the application blank is recorded. This record also includes all changes in position or rate and the reason therefor. Whenever department heads recommend change in position, the rate of pay, or release, they submit a report, giving reasons, also a rating of an employe according to industry.
16. Yes. Employment and performance record of all train operatives and full employment record of all others. (See exhibit A, last attached.)
17. Yes.
18. Yes.
19. No.
20. No.
21. Yes.
22. Not as to physical aptitude.
23. Yes.
24. Yes.
25. Yes.
26. Personal record to a limited degree is kept of each employe. This consists of the original application form, of any references which we may obtain regarding them, record of any accidents or long absence from duty, of any increases in salary and the dates. In case an employe leaves, a record is made of the work in which he excelled in ability, the references which we will give them and upon what class of work he was re-employed on.
27. I do, of the men under me—salesmen.
28. On employment dates, transfers, rating, etc., but not on production.
29. Individual production records are kept in the various departments. Health records are kept by the company physician.
30. (See exhibit C.)
31. No.
32. Yes—see attached blank.

33. Yes.
34. Yes.
35. Yes.
36. See Exhibit II.
37. Yes.
38. Yes.
39. In the ordinary case, the only personal records kept are the various changes and promotions of the employes as indicated upon the attached employment card.
40. Yes, in a number of departments, but not universally.
41. Yes.
42. ——
43. Yes.
44. Yes.
45. Yes, very complete.
46. Only of those boys who attend the local schools. We hold a duplicate report of each one sent us and keep in intimate touch with them.
47. Yes.
48. Yes.
49. Yes, to a limited extent.
50. Yes.

No. 47

Is a study made of the personal characteristics of each employe—health and physical characteristics, intellectual ability, manual ability, attention, memory, type of activity, leadership, etc.?

1. Yes.
2. Yes.
3. No.
4. Yes. Of the characteristics pertinent to our business.
5. No.
6. All employes are examined by the company's physician before being continued permanently in their jobs. The doctor comes up to the mill on Monday afternoons. As much attention to each individual's characteristics is given as can in the absence of definite written directions or standards. which have not yet been worked out. However, one man does all the hiring and brings to bear on each person hired his accumulated experience.

7. In a general way only.
8. No.
9. No.
10. ——
11. Not before hiring period. Only by observation after hiring.
12. In a very general way, yes.
13. No.
14. Yes. Generally speaking, this study is made by department heads.
15. A study of personal characteristics of each employe is made according to the principles of scientific character analysis.
16. A physical examination necessary. This made and recorded by a physician attached to the regular force. Other qualifications develop after employment.
17. No.
18. Not by any formal system, but all these things are given weight.
19. This is done to a limited extent.
20. Not any more than he comes in daily contact with his superiors.
21. No. Exceptional cases only.
22. No.
23. Perfunctory.
24. Yes.
25. Yes. In a general way.
26. Our organization is not yet large enough to make it necessary to keep written record of characteristics of each employe, as this is studied by the department head who is referred to for advice whenever we wish to transfer employes from one department to another.
27. ——
28. ——
29. There is no definite plan of study for this purpose. The production records and general attitude to the work usually make prominent those who will be considered when promotions are made.
30. Yes. Whenever such detail study is considered desirable.
31. Each new employe must undergo a physical examination before being put to work. No study made of the personal characteristics of each new employe other than this.

32. No detailed study.
33. Not particularly.
34. Yes, in so far as possible.
35. No.
36. Yes, by foremen. Record of performance and efficiency kept by Rate Department; physical examination by company physician in order to be admitted as member of Relief Department.
37. All of the above.
38. Physical examination made which covers some of these points.
39. No special study is made. We depend upon our superintendents and foremen to develop a man's characteristics and ability.
40. No. It should be.
41. Yes. We keep fairly complete records of our employes in the several departments.
42. ——
43. Yes.
44. Yes.
45. Yes.
46. No detailed study is made.
47. Not in as efficient manner as we hope to some day.
48. Yes.
49. Yes, in a general way.
50. Yes. Employes must pass a physical examination given by the store physician before entering upon their duties.

No. 48

What qualities in applicants do you specially desire and look for?

1. ——
2. Ability, activity, health, economy and reliability.
3. Cleanliness, initiativeness, mechanical ability and according to job. According to the trade requirements, we have about nineteen distinct trades in our plant.
4. Health, honesty, persistence, accuracy, enthusiasm, etc.
5. Intelligence, health and strength.
6. He shall have a working knowledge of English—shall be clean in appearance, alert, willing to work, ambitious.

7. Character and ability.
8. Industry, sobriety, and honesty.
9. Depends upon position to be filled.
10. ——
11. Service, loyalty, interest, confidence, courtesy.
12. Good physical condition—mechanical inclination—ambition to learn and advance.
13. Personality, neatness, honesty, and truthfulness; correct language, experience for the position in question.
14. Generally speaking we seek employes in good health, who are quick, intelligent, careful and diligent. When we are seeking an employe for a certain vacancy, one is selected who has in addition qualities or experience which will enable him to meet the demands of that job.
15. The qualities upon which most emphasis is placed are health, industry, intelligence, and honesty.
16. Honesty, loyalty, sobriety, capability.
17. Health, alertness, ability.
18. Intelligence, ability, honesty, industry.
19. Honesty, intelligence, ability and perseverance.
20. That they have worked in the particular branch of trade for which there is an opening at the time.
21. Must pass a physical test and come recommended. Preferably have had experience in the craft in which they will be employed.
22. Depends on employer and what job is to be filled.
23. Honesty, industry, think box, initiative, thoroughness and accuracy.
24. Varies with character of the work.
25. Good health, intelligence, skill of hand and mind, adaptability or facility to change from one thing to another, etc.
26. The qualities which we desire in applicants are: (a) health, (b) willingness and obedience to instructions, (c) capacity for self-improvement, (d) we want boosters, not kickers, (e) education, either through schools or experience.
27. ——
28. Soberness, honesty and industry. He must be industrious to hold his position, he must be honest in his work, and must be sober, both for his own interests and those with whom he works.

29. Personality, intelligence, good judgment and adaptability.
30. Applicants to be accepted must qualify on the following points:
    1. Technical fitness and proper age for the position.
    2. Education and general intelligence.
    3. Good physical condition.
    4. Those sound moral and intellectual qualities which are essential in the development of a capable, trustworthy and ambitious employe.
    5. Satisfactory record with previous employers.

    By "proper age" we refer particularly to our requirements that in certain branches of hazardous work, accepted applicants must be over 21 years of age. While we have no specific rule against the employment of elderly men, and frequently have occasion to employ such men, our general policy is to avoid if possible the employment of men past the prime of life who have been worn out in some other service, as the employment of such men makes it more difficult for us to find suitable light employment for old employes who have broken down in health or who have in some way become incapacitated in our own service, but who have not yet reached the age at which they can be pensioned.
31. General cleanliness and good physical qualities.
32. Health, right attitude, ambition, willingness to work for individual efficiency, willingness to combine their chances for advancement with company's interest, etc.
33. Health, a desire for work and to advance.
34. Qualities—honesty, experience, cleanliness, quickness, accuracy, adaptability, and initiative.
35. ——
36. Personal appearance, dress, health, physical defects, confidence, courtesy, experience qualifying for the job, stability, loyalty, etc.
37. Knowledge of principles first. Alertness, energy.
38. Read and speak English and physically fit to perform the duties assigned them.
39. Depends entirely upon the nature of the work required. We, of course, look for physical ability, honesty and sobriety in all cases.

40. There is no system to the proposition at all.
41. Good physique, common sense, an ability and desire to adapt himself to the conditions of the service.
42. ——
43. ——
44. Steadiness, and willingness to receive definite instructions.
45. Ambition, personality, aggressiveness and ability to pass the required medical examination.
46. ——
47. On the clerical workers and many of the other classes of work we have a special prepared test, covering the essential qualities of each particular job.
48. Health, honesty, reliability, good eyes, teeth, general neatness and cleanliness.
49. Capability, energy, and good moral character.
50. Health and moral qualities.

No. 49

How do you determine whether or not the applicant possesses these qualities?

1. Questions, conversation, and past records.
2. Tests and examinations.
3. References help considerably, and the personal talk by our employment manager.
4. History of applicant, and various special tests. (See Bulletin article.)
5. By appearance and by physical examination.
6. By examination and investigation.
7. By writing his references—then only by our observation.
8. By observation and personal record of his actions.
9. By trial.
10. ——
11. Observation of superiors. Results in piecework.
12. Before hiring—general appearance, address and desire to get the job. After hiring—observation by superintendent and reports made by assistants.
13. By a conversation with the applicant, and noting the points mentioned, also by communicating with references.

14. The interview reveals much of an employe's past history which is helpful in determining his fitness. If accepted, subsequent observation will enable us to determine absolutely if the selection was good or bad.
15. Health is determined by observation and a medical examination by our staff physician. Other qualifications are determined according to the Blackford's Science of Character Analysis.
16. By his performance and through observation of his superiors.
17. By question, and by trial, mostly guesswork.
18. By his appearance, what he can say for himself, his past record.
19. It is for the department head to do this in his own way.
20. By taking his word and looking up his past record.
21. By inquiry from the applicant supplemented by inquiry from former employer if deemed necessary.
22. By interview and trial.
23. Watch him.
24. By observation and questioning.
25. By trying them out on the job.
26. The determination of which qualities the applicant possesses is found, primarily by an interview, secondly by reference to previous employers. A short conversation, however, will generally determine just how well a man will fill in the prospective position. The man's general appearance as to neatness, expressions in speech, shape of forehead, mouth and chin, also will determine whether a man is capable of concentration and whether aggressive or retiring.
27. ——
28. Soberness, by general appearance. Honesty, by investigating former records and performances. Industry, in the same way.
29. By conference, appearance, educational advantages and achievements.
30. By personal interview, oral or written examination, medical examination, technical tests and a careful investigation of the applicant's previous record and history.
31. By personal observation on the part of the general foreman.
32. Principally through the personal record which is kept of each employe.

33. By asking questions as to previous employment, why left, etc.
34. By personal judgment, based on practical experience and by trial.
35. ——
36. Records maintained in employment office, by foreman and in Rate Department.
37. By observation and results obtained.
38. By test and examination.
39. Through his superintendent or foreman.
40. No system.
41. By physical examination at the hands of our company doctor, by a mental examination and close questioning and observation.
42. ——
43. His work, etc., etc.
44. Largely by careful questioning of the applicant. Of course this refers particularly to men in the factory.
45. By personal observation of applicant and investigation of references.
46. ——
47. Covered by answer to 48. Tests being given on each kind of work. These tests are written and in some cases consist of an actual trial on the work.
48. I can't tell you. I get results by application of common sense. I have seen our greatest psychologists make bad mistakes.
49. Observation, interrogation, and investigation of references.
50. By the physical examination and investigation into home and outside life.

No. 50

What qualities do you especially wish to avoid? How do you determine whether the applicant possesses such qualities?

1. ——
2. Laziness, indifference, inebriety, ignorance, inaccuracy, uncertainty of action, and general inefficiency. By tests, examinations and analysis.
3. Dissatisfied men, abnormal union men, swearing and smutty stories, drinkers of alcoholic beverages, carelessness, untidy and boasters.

4. Question too indefinite.
5. Physical weakness. Shown by examination.
6. Opposites of the foregoing (No. 48)—determined in the same way (No. 49).
7. Absence of ability and good character. Try him out.
8. Drunkenness and disloyalty.
9. Intemperance and health.
10. ——
11. Dishonesty, intemperance, trouble-making, ill-temper, soldiering. Observation.
12. Shirking, indifference, drinking. Observation.
13. Dishonesty, carelessness in dress, lack of attention to personal cleanliness and appearance, slang, carelessness in language, bad English, etc.
14. We wish to reject those who are lazy, dishonest, unsteady, or in such poor health that they would be unable to perform the work we have in mind.
15. The qualities we specially wish to avoid are poor health, laziness, carelessness, tardiness, inaccuracy, forgetfulness, disobedience, disorderliness, gloominess, impatience, intemperance, slowness. These qualities are determined quite accurately by Science of Character Analysis, together with a study of educational training and environment.
16. Disloyalty, insubordination, inattention, insobriety. Same as 49.
17. Laziness, intemperance, bad morals. The wanderer, the agitator, etc. Just question and guess.
18. Stupidity, inefficiency, dishonesty, agitators.
19. Dishonesty, intemperance and slovenliness. There are usually observable from the personal appearance.
20. ——
21. Agitators and ignorant foreigners.
22. Left to discretion of employer.
23. Drink, lazy, dishonest. By watching.
24. Laziness, indifference, slovenliness, etc. Determined from references and during early period of employment.
25. Laziness, carelessness, shiftlessness, ignorance, meanness. craftiness, pugnacity. By intimate personal association.
26. We especially wish to avoid (a) disturbers, chronic kickers.

These people generally have poor health, which can be determined by the coloring and expression of their face. (b) People who, while they may be capable, are not susceptible to suggestion. This can generally be determined by their answers to questions. (c) Nearly every applicant is asked, "What are you doing for self-improvement?" If the applicant has not enough interest to take care of his own interests by enlarging his usefulness, we do not feel that he would take care of the company's interest. (d) We wish to avoid people in poor health.

27. ——

28. (a) Indifference. (b) Carelessness.

(a) First by the attention given while talking to employment man. (b) The questions, ask applicant as to whether he has been injured before and how, will generally bring out whether or not he is a careful workman.

29. Lack of character, health and intelligence.

30. Naturally, such qualities as are directly opposite to those mentioned in No. 48, and the existence of which are detected by the methods of examination above enumerated.

31. ——

32. Wrong attitude, unwillingness to co-operate with company to mutual advantage, and other negative qualities.

33. The reverse of the qualities desired. Depend upon the questions and judgment of human nature to develop.

34. (a) Weakness, laziness, depression, ignorance, neglect and indifference.

(b) By personal judgment based on practical experience.

35. ——

36. Drink and drug habit. Losing time—carelessness and laziness.

37. Governed entirely by conditions.

38. Dishonesty and excessive use of intoxicants. We determine a man's qualifications through his superintendents and foremen. A good superintendent knows his men.

39. No system.

40. Poor physique, an inability to grow and adapt himself to conditions, and poor mental development. We examine applicant as explained in answer to question 49.

41. ——

42. ——
43. ——
44. ——
45. Laziness, dishonesty, vicious habits. Such qualities usually come to the surface during period of trial and our system of keeping in close touch with employes usually brings such information in early.
46. Heavy drinkers.
47. Covered by 48 and 49.
48. (a) Cigarettes and drinking—shiftless. (b) Always on the lookout for it. You can smell it on them. Investigate past record for shiftlessness.
49. Intemperance, dishonesty, and agitators. (b) See 49.
50. Diseased or broken-down applicants are undesirable. The physical examination reveals this condition and inquiry into their previous experiences discloses their habits.

No. 51

How do you acquaint your employes with opportunities for promotion?

1. Personal talks. Our crew is only 300 and we know them all well.
2. Preparing a procedure to cover this point.
3. By putting on bulletin in plant the results of each boy's work in the Continuation class yearly, selection from the ranks for all promotions. A graded system of merits according to the elements of each operation. If an operation has, say, four elements, we have these four or 100 per cent. and each week the standing of employes is listed in that class of work according to their ability.
4. No special method.
5. We have no plan for such promotion.
6. Regular outlines of organization and promotion have been worked out in instruction card form and the opportunities for promotion are pretty well understood.
7. Force is too large—work is all specialized. It is generally understood that we advance men already in our employ rather than employ a new man for a responsible position.
8. The fact is probably known that no outsider will be em-

ployed in any official capacity, only those in service will be promoted.

9. No system.
10. ——
11. A selection is made when the opening occurs.
12. Increase in wages is always posted on bulletin board in all shops. Every executive in the department came from the ranks. This fact is indirectly brought to the notice of all employes.
13. Our employes are told in group meetings that individual excellence will probably lead to promotion.
14. Possibilities of his job are outlined to each new employe before he begins by the employment manager. After that department head encourages him from time to time.
15. We have no fixed methods to acquaint our employes with opportunities for promotion. We aim to follow up the record of each worker quite closely so that he may be advanced according to his ability.
16. No bulletin method employed. They know of promotion of other men and are instructed that to obtain promotion capacity must be shown for greater responsibility.
17. By notice of advancement.
18. It comes, as a matter of course, in the business. Every week they can see men being promoted who are worthy.
19. There is no regular way of doing this.
20. No special method.
21. By using rival service men see that home talent is preferred to unknown outsiders.
22. We usually leave this to the observation of the employer.
23. Personal contact.
24. No special method. There is quite a regular line of progress in various branches of work with which the employes become very familiar.
25. By talks, giving them a good general idea of the opportunities in the trade.
26. We do not believe in telling an employe that a definite position is open for him if he can make good. However, it is fixed in the executive's mind the position which he believes the employe can fill in the future and arranges his work in such a way that he will be fully trained for this

position when it is vacant. When the management is fully convinced that an employe is ready for promotion, he is then told and given a probationary period to make good.

27. ——
28. They are given to understand that good workmanship, good attendance, and diligent attention to their work will be rewarded with promotion.
29. When employes become familiar with the work of the department in which they work, they can gauge for themselves the line of promotion. Employes are not acquainted with opportunities outside of their own department until they are definitely considered for promotion.
30. By information posted on departmental bulletin boards advising employes that, with the consent of their department head, they may apply for vacancies in the service in other departments and will receive preferential consideration.
31. Through the foremen.
32. The road to higher opportunities and larger salaries is kept open in our company. Every employe knows what will bring promotion when there is an opportunity to promote.
33. By talking to the ones we have in mind for promotion.
34. By pointing out the advancement of others.
35. ——
36. No specific method.
37. ——
38. Explained to them in interview for position.
39. We have no particular method. After a short term of service the men are thoroughly acquainted with such opportunities.
40. Principally through the agency of the educational bureau.
41. This matter may be talked over with them at time of employment and from their observation of the way in which changes and promotions are made.
42. ——
43. School.
44. There are few opportunities for promotion in our factory business, though the men who are at the head of the various rooms now have come up from the ranks.
45. We hope that such opportunities do not need to be pointed out to our employes.

46. ——
47. Through our School and Welfare Secretary.
48. Point out opportunities when first employed and then actually keep promises.
49. Make it a practice to fill higher positions with men from the ranks. This creates an incentive.
50. Yes.

No. 52

Do trade unions affect your graduation of laborers and their advancement?

1. No.
2. No.
3. No.
4. No.
5. Only as affecting apprentices. Our agreements with some labor unions provide for ratio of apprentices to journeymen and the time to be served.
6. No.
7. We do not come in contact with trade unions.
8. No. Do not have the leeches.
9. No.
10. ——
11. No.
12. No. About 10 per cent. of the employes of the department are on "Steady List" and receive pay for holidays and absence when ill.
13. Not as yet.
14. No.
15. Trade unions do not effect our organization in any way whatever.
16. No.
17. No.
18. No.
19. No.
20. No.
21. No.
22. No.
23. Yes.
24. No.

25. No. We are non-union.
26. No.
27. ——
28. No. We have no unions in connection with our employes at the present time.
29. Not to any appreciable extent.
30. We only employ a relatively small number of laborers in certain seasonal kinds of work and have very little trouble from this source.
31. No.
32. No. This company is practically free from trade union trouble.
33. Yes.
34. No.
35. They do; therefore, we are compelled to run an open shop.
36. No.
37. No.
38. No.
39. No.
40. Yes.
41. We rely considerably on the seniority rule in the graduation of our laborers.
42. ——
43. No.
44. No.
45. No.
46. Yes, among those who are affiliated with the unions, as they (unions) dictate the wage of each class of work. The unions do not play any part in the advancement of a man from a laboring position to that of an executive.
47. Through our School and Welfare Secretary.
48. No.
49. No.
50. No.

No. 53

What are your methods of remuneration?

1. Day work and bonus.
2. Monthly, weekly, daily and piecework rates, with numerous perquisites. Our minimum wage is $9 per week.

3. According to records of cost and quality. Individual report of all employes on all jobs under comparative conditions.
4. Home office employes, salary and bonus. Agency force, salary and commission.
5. Chiefly piecework with a minimum day rate.
6. Pay flat rate, or flat rate with a bonus of from 10 to 60 per cent. (Gantt Method).
7. Stated salary, piecework, bonus system, time work, everything—pay each two weeks.
8. Good pay by the day. Bonus for individual effort.
9. No special methods.
10. ——
11. Salary, day wage, hour wage, piecework rates.
12. Paid on hourly rate.
13. Under weekly salary, with bonuses for results above requirements.
14. Strictly to pay according to efficiency. Male workers are on piece, straight day wage or salary; female workers are on day wage; straight piece and piece with bonus. Certain employes may share in profits—see booklet.
15. All of our factory workers are paid so much for a week of 50½ hours. In a great many departments earning capacity is determined on a piecework or bonus basis. Thus each worker is remunerated according to his particular ability.
16. All classified or skilled positions are covered by specified rates of pay. In most cases this is as per agreement with labor organizations.
17. Straight piecework for operatives. Pay weekly. Weekly payroll elsewhere.
18. Pay by the hour and "job work."
19. This question is not quite clear, but we endeavor to promote to more responsible positions those who have the necessary ability and suitable personality.
20. ——
21. Monthly salaries, day work, piecework, premium work.
22. Weekly wages with bonus in certain operating departments.
23. Salary, commission and piecework.
24. Regular wages by the month, day or hour, on various kinds of work.

25. Wages and bonus.

26. Our methods of remuneration are: (a) Monthly salaries to department heads; (b) Weekly payments based on an hourly rate and the number of actual hours worked during the week to all office and part of the factory employes; (c) Piecework rates to wherever practical in the factory. We have no special method of reward for special ability other than the advances in salary.

27. ——

28. About 90 per cent. of our plant is paid on the basis of piecework.

29. Every employe is paid a weekly salary, the amount of which is determined at the time of employment. Increases in salary are made at the recommendation of department managers. In some branches of our work a bonus is paid in addition to salary.

30. All positions in the service paying up to a salary of $200 per month are named, classified and defined in an official classification; maximum and minimum rates are established for these positions and in nearly all cases intermediate time and rate steps are prescribed. Laborers, artisans and a few other employes in special lines of work are paid by the hour; all other employes are paid by the month.

31. Day work, piecework and some bonus.

32. Straight wages.

33. Some are paid by the hour and some by the premium plan.

34. Mostly piecework system, but a few week workers. Paid weekly in cash.

35. We use hour rate, straight salary, differential piece rate, regular piece rate and bonus.

36. Day work, piecework, premium work, bonus system.

37 ——

38. Pay days are semi-monthly.

39. Certain scales of wages are adopted for the various classes of work. These are subject to change by the general superintendent in individual cases.

40. There is not much method to it except the definite schedule of labor organization.

41. Financial, opportunity for promotion, a well-organized pension system.

42. ——
43. Salary and commissions.
44. Day wages.
45. ——
46. ——
47. In most cases we have standardized the salary on each position. In some positions we pay a salary with a bonus. In others we have a plan of payment known as standards, where we appraise every employe twice a year and adjust the salary accordingly.
48. Market value for this locality. Day work, piecework, pay once each week.
49. Day work and piecework.
50. Straight salaries.

No. 54

What particular methods of reward have you for intelligence, generosity, energy, loyalty?

1. ——
2. Promotion, advancement and prizes.
3. Give them better work and high rates.
4. Bonuses and promotion.
5. Nothing beyond piecework earnings and advancement to the better paying jobs.
6. ——
7. Advance in salary and position.
8. None beyond promotion to executive position, or better class of work. Holding in service when Democratic times come on.
9. Observation and general ability.
10. ——
11. Increased wages, prizes for suggestions, words of commendation, selection for promotion.
12. Above qualities would naturally bring a man to the notice of the superintendent and advancement would follow if otherwise qualified.
13. A system of bonuses and P.M.'s whereby salespeople of more than average energy and ability may earn something in addition to their regular salary.

14. The development of any or all of these qualities usually increases an employe's efficiency and his increased efficiency is what we are mostly influenced by in setting his compensation, although we greatly esteem loyalty.
15. We have no special methods of rewarding for intelligence. generosity, energy, loyalty.
16. Promotion.
17. None.
18. Advance in pay and position.
19. Honesty, intelligence, ability and perseverance.
20. ——
21. Foremen and leading men are recruited from the ranks.
22. These qualities are reviewed and considered in filling advanced positions.
23. No special.
24. Increase in salary and promotion to more important positions.
25. Bonus for immediate reward. Increase in wage scale and promotion to minor executive positions.
26. ——
27. ——
28. In connection with these qualities the pieceworker gets his reward immediately through steady work, and of course through greater production. A man who shows these qualities will be selected for more important positions, such as foremanship, etc.
29. We have no particular method of reward for these qualities. Such qualities are usually acknowledged by promotion in position and increase in salary.
30. Intelligence, energy and loyalty are qualities which we naturally expect our employes to bring to the performance of their daily tasks. The indication of these qualities in any marked degree brings its own reward in increased pay and promotion wherever possible. "Generosity" is undoubtedly an admirable attitude in any employe, but we have not considered adopting any particular method of rewarding our employes who are generous, any more than we would reward them for being pious or benevolent.
31. Increase in wages and promotion to better work.
32. Promotion in position and increase in wages.

33. Advancement to better positions.
34. Increase in salary or advance in position.
35. None.
36. No particular methods.
37. Promotion and increase of salary depend upon the above qualities.
38. Promotion and increase of wages.
39. The only reward is prompt promotion. We are always upon the lookout for men possessing such characteristics.
40. No practical methods.
41. Special prizes, opportunities for promotion.
42. ——
43. Extra commissions.
44. More pay.
45. Promotion, increased compensation, earned time.
46. None—other than where these qualities are enough in evidence to warrant an advancement.
47. These features are included in our promotion of the particular clerk.
48. Increased pay and promotion from rank and file to better positions.
49. Employes with these qualifications are the ones selected to fill higher positions; also for the best class of work.
50. Honorable mention in our store paper or in class meetings, or promotion to better position if capable, or an increase in salary.

No. 55

What are your methods for overcoming carelessness, laziness, jealousy, selfishness and fear?

1. ——
2. There are no methods for overcoming carelessness, laziness, jealousy, selfishness and fear. This entire question is being covered in our present survey.
3. Caution and then discharge.
4. Encouragement first, then discipline, finally discharge.
5. Influence of foremen.
6. ——
7. Personal observation and interviews.

8. ——
9. Personal interview, reprimand and final discharge.
10. ——
11. Reprimand and discharge.
12. Reprimands and admonishments. Discharge if cannot be corrected.
13. Reprimand, occasional suspension and dismissal.
14. An attempt to get an employe to overcome the first four would be made by each department head. If unsuccessful the employe would probably be dropped or at least would not be further advanced. Fear is rarely found here, unless it be fear of a machine, in which case we would change the work of an employe.
15. Personal direction by foreman is usually depended upon to keep up a standard of efficiency of the workers. If they fail to take advantage of his counsel they are dropped after every opportunity is given them to make good.
16. With all employes identified with train service a discipline method by record only (suspensions have been discontinued). All reprimands and commendatory entries are placed on employe's record and he furnished a copy. While it is the intention to note all infractions of the rules, violation of instructions, etc., however, special attention is given all meritorious acts, superior judgment, extraordinary interest, unusual loyalty, etc. These commendatory entries are likewise spread on the employe's record, and offset entries that might appear to his detriment. An accumulated record showing in detail how the employe erred or how he displayed unusual qualifications makes a history for himself upon which his capabilities can readily be judged. (See Exhibit "B," last attached.)

The Baltimore & Ohio System is now working under the "Discipline without Suspension" plan. The practice of suspending employes in engine and train service for infraction of the rules and other causes was discontinued and discipline is maintained by record, reprimand or dismissal. A complete and accurate history of all employes is kept in the Discipline Bureau; also an exact copy of the record is maintained at all divisional headquarters, a copy also being furnished the employe. Employes understand that a copy of their record will be furnished at all times upon request.

17. None, but a careful selection of foreman and a close contact with workmen by superintendent as well.
18. Discharge, change to less responsible work, etc., after efforts have been unsuccessfully made to correct the faults.
19. The foreman doing the hiring has the power of discharge, final appeal being in the hands of the general superintendent.
20. No particular method, except discharge.
21. Each case is handled on its merits as called to our attention.
22. No method further than what foremen may wish to exercise personally.
23. Personal talks individually.
24. Talks with employes, transfers to other positions, and if no improvement, discharge.
25. By loss of bonus and failure to promote. If flagrant, we discharge during quiet seasons.
26. Carelessness can generally be overcome by a more thorough understanding of responsibility. Whenever the result of carelessness comes to light, the person to blame is carefully shown just how his action has interfered with the general work and the proper way of handling is explained. Laziness generally shows lack of interest in the work, and waking of enthusiasm and interest in the work at hand is a deathbolt to laziness. In a greater number of cases laziness on the part of the employe is the fault of the manager. Selfishness can be overcome by a better understanding of the rights of others and a firm attitude on the part of the management to be absolutely fair and just towards all. There is no reason at all for fear during employment if the executives are of the proper capacity. There will be no fear when employes realize that their executive is not attempting to work over them but with them.
27. ——
28. Carelessness is being overcome by education and constant reminding employes of safety first. Practically all employes are on piecework, and those who "loaf" suffer accordingly.
29. Intelligent admonitions, and if these fail discharge as a last result.
30. We have no specific or prescribed methods for overcoming these qualities and in dealing with them the head of department exercises a large discretion. An employe coming

within this category is very apt to be sent for by his superior and given some plain, wholesome advice; failing to profit by this, he also fails of advancement while other employes who are conspicuously energetic, careful, aggressive, efficient, etc., are recompensed by means of advance in salary, promotion and other rewards. Force of example usually induces the backslider to correct his own faults and get in line; if not, he is disciplined or dropped from the service.

31. For overcoming carelessness or laziness, we warn the men through the foremen. If not heeded, discharge follows.
32. Conferences with employes and through our educational work and the activities of the Employes' Association.
33. Unless they can be corrected the party is discharged.
34. Executive in charge speaks personally to party.
35. None in particular.
36. General supervision by foremen and others.
37. Demerit system.
38. Personal interest in employes possessing these characteristics, advising and coaching them.
39. This is a matter for the superintendent or foreman.
40. No practical methods aside from eliminating such men from service, other than that the Educational Bureau tries to get under the skin of such men and make them realize the fact that good work, attention to duty, loyalty, etc., will be recognized and will carry its own reward.
41. ——
42. ——
43. ——
44. Discharge.
45. Warning—failure to increase compensation and if either or both are without effect discharge is the only solution.
46. ——
47. Through the education that the school gives. Through our payment plan which causes a girl to be reduced in salary for carelessness and laziness, if these are reflected in her work.
48. Consulting—advising—threatening—discharging.
49. We encourage our foremen to take an active interest in and gain the confidence of the employes by personal contact.

50. We endeavor to instill ambition into our people, but those who are persistently careless, lazy and indifferent are relieved.

No. 56

What are your methods of discharge and in whom does the power of discharge originate and where is the power of final discharge lodged?

1. Only employment manager can discharge. Foreman can return man to employment department, but cannot discharge.
2. Power of discharge originates with the departmental head, and the power of final discharge is lodged in the head of the employment department.
3. Foremen in complete control of their departments. An employe with company over three years exempt from this. Manager is conferred with in that case.
4. Originates in superintendent or section head, must be approved by executive.
5. Foremen are empowered to discharge workmen. There is always open an appeal to the manager, but this is seldom resorted to.
6. Foremen nominally have the right to discharge; however, before any person is laid off the reasons therefor are fully investigated by the labor department and if found in any degree suspicious or unjust, report is made to the superintendent, who may reverse the judgment of the department foreman, or arrange to place the individual in some other department.
7. Foreman discharges. Appeal can be made to any superior up to the president.
8. ——
9. Foreman, with an appeal to the general superintendent.
10. ——
11. The head of the department, with the approval of the superintendent or manager.
12. Superintendents have power to discharge. Superintendents may ask advice of general superintendent.
13. The employe is told his services are no longer required by the superintendent or his assistant, with whom also the decision to discharge originates.

14. Employes usually are discharged for cause by department heads. Employment manager frequently is notified before such action, but whether he is notified or not, employe's case is given consideration and he may be re-employed for work in another department.

15. You have called attention especially to the matter of dismissals. This plan, when used under ideal conditions, does not permit the person immediately supervising the work to summarily dismiss any worker. He is not required to retain any one considered undesirable, but sends such a worker to the employment supervisor with report on employe, recommending release and giving reasons therefor, together with his efficiency rating. If there is no obvious reason why this recommendation should not be approved, it is passed over to the paymaster, who pays off the worker. If, on the other hand, the worker has a grievance or there is any question of fairness, he is given every opportunity to state his case. If deemed necessary, investigation is made. In practically every case the foreman is found to be in the right and the worker kindly but frankly told so.

    Occasionally, however, it is found that the foreman is wrong—that he has acted impulsively and used bad judgment. In rare instances the man is put back to work. In other cases both the worker and the foreman are found to be in the wrong and usually such a case can be handled so that a good man is saved to the organization without impugning the discipline of the foreman. After this plan has operated for a while there are few cases where any investigation is necessary. The foremen are more careful, and of course they are backed up by the appointive officer when he knows they are acting honestly and carefully. As a result of this plan no worker leaves the institution without opportunity for the employment supervisor to endeavor to retain him if he is desirable or to be sure that he does not leave the company in a prejudiced state of mind.

16. In the departmental head. All employes have right of appeal through various officers up to and including the third vice-president, who is the ranking officer of the operating department.

17. Power originates in foreman, final power with department head. Method varies according to circumstances.
18. First in the general foreman of each department, last in the works superintendent.
19. The foreman doing the hiring has the power to discharge, final appeal being in the hands of the general superintendent.
20. Each foreman has the right to discharge a man if he has well-grounded reasons for such action.
21. Factory works foreman and final discharge superintendent; engineers and others by general manager.
22. Rests with foremen or others under whom the employe works.
23. Factory—foremen and superintendent. Office—manager and executive head.
24. Verbal notice—power originates with immediate superior in some departments; all cases come to the attention of the department head for final decision.
25. Apprentices, originates with supervisor. Adults, originates with foreman. Final authority, superintendent.
26. The power of discharge rests in the department head, in cases of insubordination, where discipline demands it. In all of the cases where employe does not work out satisfactorily, an attempt is made to give the employe a second chance in some other department. In transferring, the employment department and department heads work very close together in seeing that this is accomplished. When all hopes are given up, if the employe is unsatisfactory and there does not appear to be any way in which his work can be improved, the department head takes the matter up with the general manager, and if no further suggestion can be made, he is discharged.
27. ——
28. The foremen have the authority to discharge men of less than one year's service. The general foremen must O. K. all discharges for employes of from one to two years' service. Over two years' service, the executive head of the division must O. K. the discharge. All those discharged with a service record of over five years must be discharged only by the factory manager, or his assistant in case he is absent.

29. Department and division managers have full power of discharge for those under their jurisdiction. Discharge for cause is usually made personally by the department or division managers; for decrease in work, a written notice is often used. A notice must be filed with the employment office, however, at least 48 hours in advance of discharge, which offers opportunity for transfers or registering employes for prospective positions when they are properly qualified.

30. The responsibility for hiring and discharging employes rests with each head of department, although in some classes of work this authority is delegated to assistants, sub-heads and foremen.

31. Discharge originates with the foreman, and finally ends by the approval of the works manager.

32. Method differs in different departments. In the contract and inspection department discharge can come only from the head of the department, but managers may send unsatisfactory employes back to the training bureau.

33. The man is informed we do not require his services any longer. Power to discharge originates with the foreman in charge and final power is lodged in the general mechanical superintendent or the president of the railway.

34. Final power in general manager, although executive in charge can recommend discharge.

35. Each foreman has the power to discharge, but every individual has the right to appeal to the superintendent, and finally to the manager. The right of appeal which is experienced tends to eliminate personal feeling either for or against a workman. In reducing the force on account of lack of work, a definite method is prescribed, which must be followed. It is not left to foremen to decide.

36. Filed in employment department. Each discharge is investigated. (See Exhibit IV.) Foreman responsible, approved by general foreman and investigated by employment department. Unreasonable discharge is called to the attention of the general superintendent.

37. Complaints must be in writing to the office; record reviewed. Final decision rests with superintendent.

38. Recommendation for discharge may be made by superintendent, general foreman or foreman, but the entire power to discharge lies with the supervisor of labor.

39. A department superintendent ordinarily has the right to discharge. The power of final discharge rests with the general superintendent of the plant.

40. No special system. Of course, the labor organizations regulate methods in connection with their members, to a certain extent.

41. After due warning for inefficient service, employes are asked to resign. Power to discharge originates with the immediate superior officer and is finally lodged with the superintendent of the particular division.

42. ——

43. ——

44. The foreman has power after consultation with the superintendent.

45. Usually by notice (two to four weeks) or by immediate dismissal with at least two weeks' pay in lieu of notice. At least one warning should precede discharge. Final discharge rests with the assistant secretary.

46. With the foreman—although an appeal may be made to a superior of that foreman.

47. The power of discharging originates in the department head. Final discharge lies with the employment superintendent.

48. We discharge only when absolutely necessary for continued negligence and disregard for rules of factory—drinking, refusal to pay legitimate debts, and general insubordination. Foremen and job foremen have right to discharge. Employe has right to appeal to supervisor of employment department. If the employe makes a case with this department, it is investigated and decision rendered.

49. Discharges originate with department foreman and are approved by the division head and employment department.

50. Superintendent. Department managers are hired by the president and discharged by him. Subordinates are hired and discharged by the superintendent.

No. 58

What educational tests do you use?

1. ——
2. Penmanship, experience, spelling, letter writing, mathematics, composition, typewriting, stenography and copying from rough draft.
3. None.
4. ——
5. None.
6. No written tests.
7. ——
8. ——
9. None, except apprentices and some clerical help.
10. ——
11. ——
12. Must read, write and speak English well.
13. For writing and spelling—applicant card. For arithmetic where necessary, and oral tests at the time of considering application.
14. Writing and spelling on application blank is noted; also the grade of school employe was in when he finished. If knowledge of arithmetic is essential in a job, we ask applicants to answer problems given to them.
15. None except ability to read and write and answer questions on application blank.
16. Various—this contingent on department in which applicant is to enter.
17. None.
18. Apprentices are given a test in arithmetic.
19. In the case of skilled work applicants, we have them state their previous experience. Prospective apprentices are examined to determine if they have the equivalent of an eighth grade education.
20. None.
21. None. Man makes out application, and judged from that as to ability.
22. None.
23. None.
24. ——

25. None, with exception of apprentices, who must be grammar school graduates.
26. ——
27. ——
28. In cases of employment of foreign help, each one must pass an examination in English for reading, writing, speaking and understanding.
29. Applicants for stenographic position are tested in English and spelling, in addition to the test for speed and accuracy in shorthand and typewriting. Applicants for correspondence work are tested in English and spelling, etc.
30. For positions involving a technical knowledge of the engineering or operating branches of the business, specially prepared questions designed to test the applicant's technical education, experience, etc., for positions in the general offices and on the commercial side of the business, specially prepared questions along the lines of those proposed for adoption by the National Associated Schools of Scientific Business.
31. None.
32. None.
33. Reading and writing.
34. None.
35. None.
36. Answer questions in regard to the work for which they apply.
37. ——
38. Depends entirely on position to be filled.
39. No definite tests. The employment agent is familiar with the requirements of the various departments and must satisfy himself as to suitability of applicant.
40. In the accounting department there are certain definite examinations. In the train service there are other definite examinations, including physical, eyesight, and oral tests.
41. Physical, mental, and a careful "sizing up" of the applicant.
42. Seven problems in arithmetic (elementary) and fifteen words in spelling. Of course, with stenographers and typists we require tests in both stenography and typewriting.
43. School work and test questions.

44. For office work, writing, conversation, dictation, etc., depending upon position to be filled.
45. The only test given is to stenographic applicants, and consists of shorthand and transcribing notes. Test is given for both speed and accuracy.
46. None.
47. Covered in previous questions.
48. None for mechanics and general help. Penmanship and mathematics for clerks. Tests for speed and accuracy for stenographers.
49. None.
50. None.

No. 59

Do you investigate references?

1. Yes.
2. Yes.
3. Always.
4. ——
5. No.
6. In most cases, Yes.
7. ——
8. ——
9. Sometimes.
10. ——
11. ——
12. Yes—(see form).
13. Yes.
14. Yes, particularly those of girls who may come from out of town. Facts about other applicants usually can be obtained from our own employes who know applicants.
15. We do sometimes in order to corroborate our opinion.
16. Yes.
17. Yes.
18. Sometimes.
19. Only for clerical help.
20. None.
21. ——
22. Only for special positions.

23. Yes.
24. ——
25. Yes.
26. We investigate references whenever there is any doubt in our mind as to the honesty and ability of the applicant. In case we wish to fill a position requiring considerable previous experience or of executive ability, we generally look up references very thoroughly. References are probably looked up in about one-third of cases.
27. ——
28. Yes. This is not carried out in all cases. Only those where there is some doubt as to the applicant's past record.
29. Yes. It is required that two satisfactory references be obtained for every employe.
30. Yes, after the applicant is employed, but not before.
31. Sometimes.
32. Yes.
33. Yes.
34. Where it seems essential.
35. Yes.
36. Yes. See Exhibit II.
37. ——
38. Yes.
39. Not in the usual or ordinary cases. References are requested and investigated in some cases.
40. Generally, yes.
41. Yes.
42. Yes.
43. Yes.
44. For office work we frequently investigate the references. In the factory rarely.
45. Yes.
46. Yes.
47. Yes.
48. Yes.
49. Yes.
50. Yes.

No. 60

What is the experience history of the man whom you have to make the selection of prospective employes?

1. College graduates.
   Supt. city Schools .... 10 years—city 60,000
   Supt. Public Safety .... 2 years—city 60,000
   Efficiency work .... 3 years
2. Eight years' railroad construction work, from timekeeper to general manager. Two years banking; three years bank examining; seven years efficiency work, covering ten or twelve kinds of manufacturing, Municipal and State government and Municipal and State budget making.
3. Trained in our plant. He selects from the applicants the most likely men, and then notifies the head of the department who requires more men, and the foreman does the actual hiring.
4. ——
5. Eleven years in employment work (Employment clerk at Schenectady. Others of similar experience.) Assistance is often given employment clerk by foremen.
6. Worked as a factory hand, factory clerk, ran store room. did investigative and time study work, and now in charge of Labor Department.
7. ——
8. ——
9. ——
10. ——
11. ——
12. No one man engages the new men. Each superintendent hires his own men, using his experience and knowledge of the work.
13. Six years at John Wanamaker.
    Seven years at Lit Bros.
    Six and one-half years with this firm.
14. Employment manager gained his experience in various positions with this company.
15. He has established and operated employment departments in several of the large institutions of the country, having had

personal instruction under Dr. Katherine M. H. Blackford in the science of Character Analysis.

16. Age, elementary education, scientific and classical education, previous to employment.
17. Several years with us.
18. Served his apprenticeship with us and has been with us for more than thirty years, in positions of growing responsibility.
19. Employes are hired by foreman and department heads rather than by one man.
20. ——
21. Fifteen years as Superintendent's and Employment Clerk and consequent familiarity of the qualifications required for the different departments of the factory.
22. We have no special person to do this work. Each employer does his own selecting.
23. Variable, depending on who does it, foreman—supt.—sales mgr., etc.
24. ——
25. He has gained all his experience in our employ.
26. The past experience of our employment man has nearly all been with our company. In addition to this, however, he has had two years of experience as a public school teacher and his selection of employes is subject to the approval of the department head under whom the applicant is to work. Our employment department has developed from the very beginning with the man who now has charge and the general manager is consulted whenever any important selection is made
27. ——
28. The man whom we have at the present time engaged in the selection of our employes has come up through the ranks. He was first employed in our engineering department as stenographer, and later as follow-up clerk. Following that, he was assistant to the manager of the efficiency and welfare department, which department was directly concerned with the matters of efficiency and welfare, throughout the plant. At the time of taking up the employment work considerable time was spent by him in the factory in order to become familiar with our work.
29. Manager, Educational Department, Western Electric Co., Chicago.—Manager, Employment Department, Wm. Filene's

Sons Co., Boston.—Supervisor Personal, Willett, Sears and Co., Boston.

30. Do not quite understand this question. Applicants are interviewed by the Superintendent of Employment, by his assistant and by several other interviewers in the employment bureau. Applicants accepted as a result of these interviews are classified according to the class of work desired in an accepted list and this list is drawn upon for purpose of filling vacancies in the service. The final selection from the several applicants sent for the given position is made by the Head of the Department. The Superintendent of Employment Bureau has been in the company's service in various responsible positions for a period of twenty-three years and the other interviewers in the department have all had a number of years' experience in employment work.
31. General foreman has had charge of men in the capacity of foreman for the last ten years, general foreman for more than two years, during which time he has done practically all the hiring of help.
32. Employes are selected by different officials in different departments.
33. Generally selected by the foreman they will work under.
34. Twenty-two years of practical experience.
35. ——
36. Asst. Supt. in charge—Experience: iron and steel worker—Graduate Purdue University in E. E.—Machinist in Steel Rwy. Repair Shop—Telephone and Elec. P. and L. Wireman—Inspector of underground wiring for P. and L. Service—Tester and foreman of tests, W. E. & M. Co. Director of Trades and Graduate Apprentices—Asst. Supt. in charge of Trades Apprentices and Employment. Employment Clerk—Experience as first-class Machinist—Foreman and instructor in the Trades App. Div. Personal qualities.
37. ——
38. Must be courteous, yet firm and must be experienced enough in all lines of work to be able to talk intelligently to prospective employes.
39. We have about fifteen employment agents. All are familiar with the needs of their plants.
40. No special man for this as a rule. The Chief Clerk of the

department, or Trainmaster, Master Mechanic, or Road Foreman of Engines for men in train service.

41. The men selecting employes have been in the service of the particular department in question for a considerable period of time, and have a good all around knowledge of the requirements of the department.
42. ——
43. Twelve years with company.
44. Largely years of experience with men.
45. Entire business experience (12 years) with this company. Has been nearly seven years on this work. Graduate of Yale University.
46. None so employed.
47. Been doing this work for a number of years.
48. Common School—night study—machinist and toolmaker—Was foreman of departments—reader of good literature—student of the human element—member of committee on education, recreation and civil service.
49. Has been in our employ and connected with this class of work for the past nine years.
50. Thirteen years.

No. 61

Approximately what percentage of your present force is composed of non-English-speaking foreigners?

1. None.
2. Practically none.
3. Three per cent.
4. ——
5. About one-fourth at Schenectady and Dunkirk plants, a very small percentage at Pittsburgh, Paterson and Montreal, and practically none at Richmond.
6. Not more than 5 per cent.
7. 1/100.
8. ——
9. Approximately 10 per cent.
10. Fifteen per cent.
11. ——
12. None.

13. Three per cent.
14. About 1 per cent.
15. All employes speak English.
16. Figures not available.
17. One-half.
18. Practically all can speak some English. We have noonday classes for about thirty who know the least of English.
19. Five per cent.
20. None.
21. No non-English-speaking employes at present.
22. Very small, less than 1 per cent.
23. None.
24. ——
25. None.
26. 100 per cent. of our employes speak English.
27. ——
28. We do not employ any help that cannot speak the English language. We are also eliminating all those of foreign birth that cannot read and write English.
29. None.
30. During the summer season when we have a force of laborers employed in our street department, the proportion of non-English-speaking foreigners on our payroll to the entire payroll is probably about 2 per cent. This only holds good in the summer months and during the balance of the year the number of non-English-speaking foreigners on the payroll is a negligible quantity.
31. Less than 5 per cent.
32. Practically none.
33. Ten per cent.
34. About 5 per cent.
35. None.
36. Less than 2 per cent.
37. ——
38. No actual figures, but we believe less than 1 per cent.
39. About 30 per cent.
40. Am not in a position to give this information.
41. See attached sheet for statistics.
42. ——
43. None.

44. Practically none, though quite a few of our men are foreign born.
45. None.
46. Five per cent.
47. Five per cent. In our manufacturing departments.
48. None.
49. Less than 1 per cent.
50. None.

No. 62

What methods have you pursued in getting help from the outside when your local supply was not sufficient? Which method was most effective?

1. ——
2. Newspaper advertising and employment agencies.
3. Through our local manufacturers' association.
4. ——
5. We have never been obliged to ask for outside help.
6. None—have not had to go outside of Passaic.
7. Blind advertising.
8. ——
9. Advertise.
10. ——
11. ——
12. Use local supply—always enough—not always up to high standard.
13. When necessary we advertise in the Philadelphia papers, the New York papers, and the trade journals.
14. We have good results from obtaining names of desirable persons from our own employes. Sometimes we use newspapers for special cases and get good results.
15. It has not been necessary to seek help outside of our local field except for some of the executive positions. Occasionally we advertise in national trade journals for technical help.
16. Through our labor agencies as explained in answer to Question No. 44.
17. Advertising and sending employment man to other cities. Combination of advertising and representative most efficient.

18. Have already referred to the Metal Trades Association.
19. Advertising.
20. None.
21. Have advertised in newspapers in other towns. Results not satisfactory.
22. Send our persons as special representatives.
23. Always plenty.
24. ——
25. Advertising in out-of-town papers.
26. We have always been able to get sufficient people in our own city.
27. ——
28. We have had employment agents from the company send in help. Have used Statewide advertising campaigns. And have had employment agencies send in help. The most successful methods of obtaining help from the outside are those who answer "Ads" and write in to us. They seem to be more permanent.
29. We have never had to meet such an emergency. The local supply is sufficient.
30. By advertising in the newspapers in towns and cities within a radius of five hundred miles; by advertising in technical magazines; by direct correspondence with educational institutions all over the country. We have found each of these methods effective for the particular class of help desired.
31. Local supply has always been sufficient.
32. Always have applications ahead on file.
33. Employment agencies—but generally the men apply in person for work.
34. Local supply always sufficient.
35. Advertising and agencies.
36. Advertising in daily papers of the country and papers of districts where desirable help is used. Send representatives to large labor centers.—Several city employment offices working in conjunction with main office at East Pittsburgh.
37. ——
38. The places we cannot fill by men coming to our employment department are taken care of by the Employers' Association who use their own discretion whether or not to get out-of-town help.

39. Occasionally we have been compelled to employ outside employment agencies but our experiences with them have been unsatisfactory.
40. Labor and employment agencies principally.
41. Advertising which has generally been effective.
42. ——
43. None necessary.
44. Have never had to call for help outside of local supply except for few experts in our testing room, chemical departments, etc.
45. Never have had to go outside.
46. Local supply always sufficient.
47. Never had to meet this question.
48. Knowledge of the best markets—advertise in all the leading papers of that locality—select from reply the most intelligent—mail them application blanks—select from reply with application blank those that show the necessary experience. Go to city and interview and employ those who meet requirements.
49. Have experienced no such difficulty, but Employers' Association has assisted other local manufacturers in securing help from the outside.
50. Advertising in newspapers or trade papers.

No. 63

Name the causes which you feel are responsible for floaters.

1. ——
2. Desire for experience and wanderlust.
3. ——
4. ——
5. (a) Irregularity of work, especially during past year.
   (b) Intemperance and other bad habits.
   (c) When jobs are plentiful, the belief that one's condition can be improved elsewhere.
   (d) Natural unrest and the desire to be on the move. (Mostly among single men).
   (e) Interference by Labor Unions with the desires of individual workmen.
6. ——

7. Overstatements of prosperity—partly.
8. ——
9. Uneasiness.
10. ——
11. ——
12. No experience with floaters.
13. Inefficiency, indifference, a discontented mind, and over-ambition.
14. Seasonality of many industries forces employes to change ever so often and some of them acquire habits of unsteadiness and restlessness. Employes who usually follow building and construction work are unable to do this in winter and seek jobs inside which they leave again in the spring. Some of the restlessness is due to poor placement work.
15. We are not bothered with floaters.
16. ——
17. Our employes are mostly women and do not float much.
18. Wanting to get a variety of work, friction developing with sub-foremen and fellow-workmen, hope for more pay, etc.
19. "Greener fields afar off."
    Lack of home ties.
    Lack of family responsibility.
    "Wanderlust."
20. ——
21. Not troubled with floaters.
22. Inefficiency. Lack of education or misdirected education.
23. Drink.
24. ——
25. We have few floaters among our skilled trades. Intemperance, laziness or lack of skill would be the only causes. The unskilled workman if steady, willing worker generally works himself into a steady job.
26. The causes which make floaters are (a) The habits and training of them themselves, which in many cases make them soon grow tired of one job or locality. (b) The great difference between the amount of work done in the modern factory at different seasons of the years, meaning that a large percentage of the total force is hired and discharged within each 12 months, due to increase and decrease in work. This throws many men out of work after they have had a posi-

tion for a few months. (c) Lack of ambition and willingness to take the hard knocks which come along with the pay envelope. Many people come to our city with the idea that work can always be found in Chicago, making a very large number of the unemployed, especially when business is poor.

27. If men were selected as carefully as materials and machines, there would be no floaters. Lack of training of new boys and men. Lack of proper promotion schemes.

28. The newspapers are perhaps the most responsible for a great many floaters. Men leave positions they have in other cities on the strength of so-called booming conditions in a certain locality. The men come to that city and as a general rule find that the companies cannot supply the men in the city with work. They have started on the road to be a "floater."

29. Lack of vocational guidance in youth. Irresponsible hiring and firing, and seasonal employment.

30. There are so many influences responsible for production of floaters that it would be impossible to enumerate all of them. In some of the hazardous kinds of work such as that of overhead linemen, a more or less migratory class is created by the inducement of higher wages in more remote sections of the country, by the scarcity of the labor supply and the consequent certainty of finding work in any section of the country. This in turn leads many of these men to gradually work south or southwest during the winter months in order to avoid the unpleasant winter climate of the northern states. The large class of floaters comprising those who drift because they are unskilled, lazy or dissolute, are largely the result of involuntary poverty and a defective social system. Insufficient education, bad environments, the necessity of starting early in life to earn their living, and lack of vocational training, force many of this class into casual and blind alley occupations in which they rarely find opportunity to advance themselves or to specialize in work that promises a future. Men working under such heavy handicaps are soon outclassed by those with whom they have to compete, who have had a better start. After losing several jobs through lack of efficiency, they soon sink into the class of men who apply at the Employment Bureau for "any kind of a job" and who

seldom have any definite goal or definite ambition. Compulsory education and vocational training of the right sort will undoubtedly prove to be an effective remedy for this unfortunate condition, within the next generation.

31. Have none.
32. Practically the only floating employes in this company are the ash-handlers and coal passers, many of whom leave in the spring and seek employment on river craft or ocean going steamers.
33. ——
34. 1. Seasonal work. 2. Methods of purchasing merchandise.
35. Liquor.
36. New industries creating a demand in labor in excess of supply. Auto industry, public work mainly carried on at certain particular seasons, also fluctuations in activity of building trades. Lack of interest on the part of employers in the development of mechanics and others tradesmen. Fluctuations in business conditions.
37. ——
38. The disposition of the individuals principally.
39. The great majority of our floaters are found among foreigners who are unmarried and live in groups in boarding houses. I would not venture an opinion as to the cause.
40. Don't care to go into an academic discussion of this subject.
41. Lack of education and training, especially in their economic and social significance.
42. ——
43. ——
44. Ignorance, indifference growing largely out of lack of training. Discontent due to failure to find his own vent and so his own proper place in the world.
45. ——
46. Restlessness—roaming tendency.
47. This is a mail order house, many of our people being employed on clerical work or part of their work being clerical. Our principal reason for floaters or short-stay people is that they do not like the work to which they are assigned. We are unable, at times, to give the applicant all clerical work and have to assign him to a position which is only partly clerical and partly stock-keeping or wrapping. We endeavor

to get High School people and many of them, after trying the wrapping and stock-keeping positions for a few days, decide to withdraw.

48. (a) Lack of home environments, when needed. (b) No responsibilities. (c) Drink and gambling—bad companions.
49. Labor difficulties, family troubles, intemperance, etc.
50. Inefficiency is the chief cause which develops floaters.

No. 65

What provisions have you for the appeal of a workman from the decision of the boss?

1. Anyone can see the works manager, president or general manager.
2. Employment department.
3. Personal investigation by superintendent or assistant. If workman has been with us two or three years we transfer him to another department after straightening out the matter.
4. ——
5. The manager is always willing to hear appeals of this kind.
6. Office of the superintendent, located in the factory building, is open to any and everybody at all times; in his absence it is well understood that some other particular person is in responsible charge and available for whatever may come up.
7. Right up to president.
8. ——
9. Superintendent first, then general superintendent.
10. His superiors.
11. ——
12. Appeal may be made to general superintendent. (See card.) Framed copy in every shop.
13. ——
14. Employe may go to the division superintendent who is over his department head, or if he prefers to the employment manager.
15. This question is answered under question 56.
16. Appeals to various heads of departments up to and including third vice-president, who is the ranking officer of the operating department.
17. None but the right of any workman to see any superior.

18. To the works superintendent, and occasionally to officials of the company.
19. There is no regular provision. The general superintendent will grant an interview to any workman.
20. None.
21. Right to appeal to the superintendent.
22. None.
23. Shop, go to superintendent; office, go to president.
24. ——
25. Any man can apply to the president of the company.
26. A workman always has the privilege of going to his boss' superior if he does not feel that he is receiving justice. This is not expected except in cases of necessity, however, as, if allowed, it would seriously affect the discipline which the foreman would be able to maintain.
27. ——
28. An employe who feels that he has been treated unfairly, and has made an effort to adjust the matter with those directly over him without receiving satisfaction, can bring his case before the manager of the labor bureau for thorough investigation.
29. Any employe is at liberty to take up with the manager of the employment bureau such matters as may concern the working conditions, his general welfare or that of his fellow employes. Matters which concern only the technicalities of the work or department discipline are solely within the jurisdiction of the department managers.
30. An employe discharged by an authorized assistant or foreman may appeal to the department head if he feels that he has been unjustly treated. In rare cases employes have even carried such an appeal over the department head to one of the executive officers. Such cases, however, are very unusual. While employes are given every opportunity to state their grievances, if any, the company aims to uphold the decisions of its officials and department heads, believing that discipline can only be maintained in this manner.
31. No definite provision for a case of this kind.
32. Depends on the department in which the employe is working.
33. An appeal to the next higher in authority can be taken until the president of the road is reached.

34. ——
35. Already answered.
36. Any workman may appeal right on up to the president of the company or he may appeal to the Grievance Committee.
37. ——
38. An employe always has the privilege of appealing to the supervisor of labor, who has the authority to correct any unjust grievance.
39. The workman may always appeal to the general superintendent. In some cases an appeal is made to the president.
40. They usually can get a hearing higher up without any great formality. In the case of labor union members such appeals are handled by grievance committee man.
41. The employes generally take their cases from the decision of the immediate boss to the superintendent of the particular division, and in the case of trainmen eventually to the general manager.
42. ——
43. ——
44. He may take his case to the superintendent if he desires.
45. ——
46. An appeal to a superior officer.
47. It is known in our establishment that any worker may appeal to his superior. This is probably not a satisfactory plan, as the average employe is reluctant to go over the head of the immediate superior.
48. Appeal to the supervisor of employment department.
49. The workman may appeal from the foreman's decision to the division head or to the factory executive. All appeals are given due consideration.
50. He may appeal to the store superintendent should he feel the decision of the department manager is unfair.

No. 117

Is your plant equipped with sanitary water closets, urinals, wash rooms and shower baths?

1. No. Plant is old. New plant contemplated includes everything.
2. Yes.

3. No shower baths.
4. Yes.
5. All except shower baths.
6. Yes, except no shower baths.
7. Yes.
8. Yes.
9. Yes.
10. Yes.
11. Yes.
12. Yes.
13. Yes, with the exception of shower baths.
14. Yes.
15. Yes.
16. ——
17. Yes, but only six shower baths.
18. Yes.
19. All except the shower baths.
20. Everything except shower baths.
21. Yes.
22. Modern sanitary equipment throughout.
23. Partly.
24. Yes, excepting shower baths, of which we have a few only.
25. Yes.
26. Yes, all except the shower baths.
27. ——
28. (a) Yes. (b) Yes. Each department has a wash room, individual bowls. Shower baths in two departments where they are mostly needed.
29. Yes.
30. Yes.
31. Yes.
32. Yes.
33. Have water closets and urinals, but no shower baths.
34. Yes, except shower baths, which are not necessary.
35. All but showers.
36. Yes, except baths.
37. Every convenience except shower baths.
38. Yes.
39. ——
40. Generally, yes.

41. Practically with all of these.
42. ——
43. Yes.
44. Yes.
45. Yes.
46. Yes.
47. Yes.
48. Yes.
49. Yes.
50. Yes.

No. 118

Do you insist upon maintenance of neat and clean conditions in and about your yards and buildings?

1. Yes.
2. Yes.
3. Subject to monthly investigation.
4. Yes.
5. Yes.
6. Yes.
7. Yes. We have an inspector whose sole duty it is to see that this is done.
8. Yes.
9. Yes.
10. Yes.
11. Yes. Very strongly.
12. Yes.
13. Yes.
14. Yes.
15. Yes.
16. Yes.
17. Yes.
18. Yes.
19. Yes.
20. Yes.
21. Yes.
22. This is done.
23. Yes.
24. Yes.

25. Yes.
26. Every department head continually checks to see that everything is kept clean and neat.
27. ——
28. Yes.
29. Yes.
30. Yes.
31. Yes.
32. Yes.
33. Yes.
34. Yes.
35. Yes.
36. Yes.
37. Most exacting in these.
38. Yes.
39. ——
40. Generally yes.
41. Yes.
42. ——
43. ——
44. Yes.
45. Yes.
46. Yes.
47. Yes.
48. Yes.
49. Yes.
50. Yes.

No. 119

Do you maintain proper light and ventilation, not only in your plants, but also in your offices?

1. Yes.
2. Yes.
3. Subject to monthly investigation.
4. Yes.
5. Yes.
6. Yes.
7. We aim to.
8. Yes.

9. Yes.
10. Yes.
11. The best.
12. Yes.
13. Yes.
14. Yes.
15. Yes.
16. Yes.
17. Yes.
18. Yes.
19. Yes.
20. Yes.
21. Yes.
22. Yes.
23. Yes.
24. Yes.
25. Yes.
26. One person in each department is held responsible for the ventilation. We try to keep a temperature from 65 to 70 degrees in office and in shipping room and factory where the men are doing physical labor, the temperature is about 60 degrees. All work requiring steady and constant attention is placed near the windows. The interior of the floors being used for storing of stock where artificial light can be used. In cases where proper light is not used, we have found in the past that a number of employes suffer from eye trouble and were not able to work as efficiently or as regularly. Good light and ventilation are essential for proper health and work.
27. ——
28. Yes.
29. Yes.
30. Yes.
31. Yes.
32. You bet we do.
33. Yes.
34. Yes.
35. Yes.
36. Yes, though the work has not yet been fully completed.
37. Yes.

38. Yes.
39. ——
40. This is not given the scientific attention that it deserves.
41. Yes, as far as possible.
42. ——
43. ——
44. Yes. Every effort possible in our building is made to give proper light and ventilation.
45. Yes.
46. Yes.
47. Yes.
48. Yes.
49. Special attention has been given to the problems of light, heating, ventilation and sanitation. Vacuum cleaners are used in offices and the mopping of all floors and dusting are done by a night force of janitors.
50. Yes.

No. 120

Please give your experiences as to the relative value of the above methods in improving the efficiency and general good health of your employes and in improving their methods of living.

1. All are important.
2. All three above are considered most important. We look upon them as duties as well as necessities.
3. ——
4. ——
5. We have never made special effort to follow up this matter, but we believe that such things have a moral value.
6. ——
7. We have not gone into the matter to any great extent, but believe that as an educational value lantern slides showing actual conditions and the discussion of accident cases which have happened in the works are by far the best method of teaching the men. Next to this we believe that a bulletin board service properly maintained is an excellent thing.
8. ——
9. The subject never has been investigated but there can be

no doubt that working conditions do have such an influence for good or bad.

10. ——
11. They contribute in the largest measure to the usefulness and contentment of the employes.
12. Cannot state any definite experience.
13. ——
14. We regard 117 and 119 as essential to plant operation; 118, though not quite so necessary, we believe is necessary as an example if employes are expected to be neat in their work. It goes with a quality product.
15. It is generally conceded that satisfactory conditions regarding light, ventilation, etc., result in increased efficiency.
16. Of much value.
17. No conspicuous results.
18. This has always been considered an important factor in the production of high-grade work and keeping employes contented.
19. We feel that anything to improve the general tone of the men is worth while. The above tends to do this and is greatly aided by the employment of a company doctor, dentist and visiting nurse.
20. ——
21. It tends to improve the general tone of the employes.
22. Beneficial.
23. ——
24. All indispensable in securing the highest efficiency.
25. We have no knowledge of the relative value of these methods, but have always adopted them as a matter of decent business.
26. ——
27. ——
28. There is no doubt that sanitary, well lighted and ventilated conditions increase the efficiency and health of the men. Such has been the experience of our company.
29. ——
30. We have always endeavored to house our employes in pleasant and hygienic quarters. In some departments which were formerly overcrowded the recent change to new and commodious offices has apparently had a favorable effect on the health of employes and has resulted in a noticeable

diminution in eye strain and loss of time on account of sickness.

31. We believe the above increases the efficiency of employes, but have no statistics.
32. All good.
33. Feel they are valuable.
34. Example set cannot fail to bring results, and must increase efficiency and general good health. Our experience has been gratifying
35. All beneficent.
36. They undoubtedly have some effect but are unable to say how much.
37. Very effective.
38. Very satisfactory.
39. ——
40. It cannot help but be productive of good results and increased efficiency that would more than pay for the effort and expense.
41. Proper education as to the necessity for neatness and good habits should solve the problem to a large extent.
42. ——
43. ——
44. Our buildings are unusually well lighted and the results have been very satisfactory.
45. It may be of interest that in the six months from August 15, 1914, to February 15, 1915, the ratio of lost time to total time was 1.26.
46. ——
47. Our management are firmly convinced of the humaneness as well as the economy in providing proper light, ventilation and clean, sanitary quarters for our people.
48. No one could question their need.
49. Always have maintained these conditions. Believe they have a tendency to create the desire in employes to live accordingly.
50. The insistence upon the proper keeping of the property is bound to have a good influence upon the habits of our employes and will therefore improve their methods of living. We go further than this in that we investigate the home conditions and suggest and help in its improvement.

No. 121

Have you made any change in your method of treating injured employes since the passage of the Compensation Law in your State?

1. No, we paid medical bills and compensation long before law required it.
2. No.
3. No, we have had hospital for five years. Safety committee two years and a half.
4. Not applicable to our business.
5. No. It has been our practice for many years to treat at shop or city hospital all injuries received at the plant.
6. No.
7. We have always given practically the same treatment to our men, the only change made has been the putting on of an investigator who goes out and looks up the men in cases where they fail to return to our hospital for treatment as instructed by the doctor.
8. ——
9. No.
10. ——
11. No.
12. No.
13. No.
14. No.
15. No.
16. No.
17. No. We always did more and still do more than law requires.
18. No, although we expect soon to establish a dispensary with nurse and physician.
19. No.
20. No.
21. No law at present—no change contemplated.
22. No compensation law.
23. Some.
24. No.
25. No, we have always paid doctor's bills and two-thirds of salary while they have been out of work on account of injury.

26. We have always given free medical attention to any employes injured while in the company's service. This is now required by the Compensation Law and we have a doctor retained to take care of any minor injuries.
27. ——
28. None.
29. No.
30. No.
31. No. We had a shop hospital in full operation before the law went into effect.
32. No, the company has continued its past liberal policy by paying its injured employes full wages for the first two weeks of disability, during which time they receive no pay from the Compensation Commission; and therefore the company makes up the difference between the amount received by the employe from the commission and his full wage. Employes have been notified that payments are entirely gratuitous on the company's part and are revocable at any time; and furthermore, that an employe receiving such payments does so with the understanding that the company's rules and regulations relative to the treatment of injury will be quickly adhered to.
33. No.
34. No.
35. No.
36. We have no Compensation Law in this State.
37. No.
38. No, had present plan, including hospital and physician, before the law was passed.
39. ——
40. Don't know.
41. ——
42. ——
43. No.
44. ——
45. No.
46. ——
47. No.

48. Yes.
49. No.
50. No, we always did all we possibly could for them

No. 122

What do you do to prevent malingering?

1. Have our sick benefit department operating committee and own doctor investigate cases.
2. We have our own plant hospital, doctors and visiting nurse.
3. ——
4. ——
5. No special practice. It is easily detected if continued very long.
6. All persons applying for permission to leave the mill are first sent to the nurse for first-aid treatment or advice. This is done not with the idea of compelling anyone to stay at work who is unwilling to, but with the idea that first-aid suggestions shall be available for indisposed employes.
7. The injured man is promptly treated and very closely followed up. He is visited not only by our physician but by an investigator. He is never for a day permitted to believe that we are not on the job and while perfectly willing to give him treatment and the time necessary to make recovery are anxious for him to be back in the shop. We have very little trouble from malingering.
8. ——
9. We believe that the loss of 50 per cent. of injured employes' wages and total loss during first two weeks is a certain preventative. All cases are treated by competent physician or nurse at emergency room.
10. ——
11. The nurse and the visitor from our Aid and Benefit Association (a workman in the shop, strictly an employes' organization) keep after them, sometimes ordering an examination by a specialist.
12. Get doctor's opinion and make frequent calls on injured or ill absentee.
13. Deduct salary. If it continues she is discharged.
14. That is largely left to the insurance association in serious

accident cases. We have very few accidents that require compensation or even cause absence from work so that malingering is not a matter of great concern.

15. Cases are followed by the company's physicians and department heads.
16. Investigation of cases by superiors and medical examiners.
17. No special method.
18. Watch each case and deal with it individually.
19. We have a committee of our Mutual Aid Society whose duty it is to visit our sick and to see that this is not done.
20. ——
21. This will be looked after by the dispensary attendant and physician as well as the Relief Union will look after this.
22. ——
23. ——
24. Case is watched either by physican or visiting nurse.
25. If we discover it, we drop them from our employ.
26. We get the right kind of employes first and secondly see that they are watched and given proper instructions.
27. ——
28. In cases of injury, by having the employes report to the plant physician at stated intervals. In cases where employes are out on account of sickness, each employe is called on at his home by one of the employment bureau staff to ascertain the cause of illness and how long employe will be out from work.
29. In case of reported illness of long duration the visiting nurse is sent. Frequent absences of brief periods—a day or two—are investigated and if continued are cause for dismissal. Too frequent visits to hospital for rest during working hours are investigated and offending employes obliged thereafter to register time off for such absence.
30. Employes who persistently lose time on acount of alleged illness or who ask to be excused because of some ailment, are instructed to report to the company physician who gives them a thorough overhauling. If, in his judgment, they are malingering he cautions them and also reports the matter to the department head. Repetition of the offense is usually followed by disciplinary measures or by discharge.
31. Keep close watch on employes by a follow-up system.

32. If an injured employe is unable to leave his home and do any work at all, he is placed in the company's storeroom on what is known as partial duty and he is given some such light work that will in no way retard his recovery or cause him any inconvenience whatsoever. The company regards the work thus done as negligible, the employe being given a light task solely for his own benefit and as a means of keeping him under surveillance.

33. ——

34. Piece work system. Where week work employed, standard is set.

35. ——

36. Follow up the various cases through our relief department.

37. ——

38. Our physician says when the men are to go to work.

39. ——

40. No practical method.

41. Properly investigate the cases as they appear and treat them on their merits.

42. ——

43. ——

44. ——

45. In all cases of absence we insist upon a doctor's report which is passed upon by one of our own doctors. If there is no attending physician our own doctor investigates personally.

46. ——

47. We have had no trouble in this line.

48. We try to make sure we have a case, then make it so hot for him it never recurs.

49. Injured employes are visited at intervals and regular reports demanded from attending physician.

50. Those whom our physician believes are malingerers are reported to the superintendent. He has a talk with them and has suggested a vacation until they are able to work steadily. The mere suggestion of a forced vacation is often a cure.

No. 123

What other method, if any, have you adopted looking to the maintenance of the health of your employes?

1. Sick benefit dept. with free medical service.
2. We have a force of about 100 men to keep the factory clean, a factory inspector and a health committee. The health committee makes inspections and improvements. Additional work is done by illustrated lectures, bulletins and other publications.
3. Mutual Benefit Association—Tuberculosis Committee—Arrangement of benches for girls. Revolving furniture so girls can sit at jobs. Mechanical appliances to lift work instead of girls doing it.
4. See Question 126.
5. Safety bulletins.
6. ——
7. We give medical treatment to all our employes and more especially to those who belong to our benefit society. Men are encouraged to consult the doctor when feeling unwell and are given advice concerning personal hygiene and proper living.
8. ——
9. ——
10. ——
11. Watch them and advise with them.
12. None that we can definitely state.
13. Hospital room with medicines, bed, etc. Rest room and commodious roof-garden.
14. ——
15. Health conditions being constantly watched by company's physicians and nurses.
16. Instructions on matters of health and correction of insanitary conditions wherever possible.
17. Trained nurse gives individual advice as she sees it needed. Occasional lectures.
18. Rules against spitting, help in cases of incipient tuberculosis, etc.
19. We have a relief department where simple treatments are given.

20. No special method.
21. A shop safety committee who also look after these matters.
22. Paid vacations for office people and others in responsible positions.
23. ——
24. Inspection at regular intervals.
25. None.
26. The company cafeteria serves much better food than any restaurant in the neighborhood and bulletins are frequently issued showing proper exercise and food to take in order to obtain most healthful results.
27. ——
28. None.
29. ——
30. Health talks by the company physician and others, establishment of tennis clubs, inter-departmental baseball teams, bowling teams and other outdoor recreational features for the benefit of employes; also field days and outings. We are now planning to get out a series of health bulletins.
31. Department of Health and Sanitation.
    (1) Make a complete physical examination of all employes.
    (2) All minor sickness treated.
    (3) All accidents treated and redressed..
32. None at the present time, but have such plans under advisement.
33. No other methods in use.
34. Health lectures—Emergency hospital—and service of trained nurse for emergency illnesses. Personal instruction of trained nurse.
35. None.
36. Do not know of anything else beyond the preceding.
37. ——
38. Physical examination. Recreation grounds. Interdepartmental baseball, tennis, bowling leagues, etc.
39. ——
40. On the Illinois Central our Chief Surgeon has prepared a very interesting series of articles on health and sanitation which is run in our *Employes' Magazine*. This is about all that is done, however.
41. Inspection.

42. We make periodical health examinations which are recorded on cards especially drafted for that purpose.
43. ——
44. ——
45. See memo attached.
46. "Clean up" week is a semi-annual occurrence with us—entire plant is cleaned.
47. Have an organized Welfare Department which, together with our Department of Instruction looks after the health of all employes. Our Welfare Department includes a hospital with proper facilities.
48. We have a visiting nurse who goes into their homes and teaches cooking and general home sanitation.
49. Lockers and washrooms are provided for all employes; also gymnasium, shower baths, swimming pool, tennis and quoit courts and baseball field. A Relief Association is conducted by employes.
50. Hospital, rest rooms, country summer home, roof garden, nurse and physician, all to help in the maintenance of health. Besides the home work indicated in Question 120.

No. 124

Do you attempt to exercise any supervision over employes' food in plant or at home?

1. No.
2. In the plant but not in the home. We, however, distribute much educational matter concerning how and what to eat.
3. No.
4. Company provides noon lunch free for all home office employes.
5. No.
6. In the mill lunch room we attempt to offer the best supplement to the lunches brought from home that we can.
7. We attempt no supervision. We have a restaurant for our shop employes and serve soup, sandwiches, coffee, pastry, fruit and sweet and buttermilk. All of this is prepared in the factory and sold practically at cost.
8. No.
9. No. We are planning a restaurant in the plant.
10. No.

11. Our dining room furnishes a wholesome and bountiful meal. Gardening is encouraged by prizes.
12. No.
13. By providing a cook in the lunch room who gives nourishing, wholesome food.
14. In our factory lunch room we try to supplement our employes' lunches with simple, nourishing dishes at a moderate price. The more nutritious the food the lower relatively the price.
15. In the home, no. The company operates a restaurant with a competent dietitian in charge, where a noon meal is served to employes at cost.
16. Not at their homes.
17. No.
18. No.
19. No.
20. No.
21. No.
22. No.
23. No.
24. In the Traffic Department only, lunch is supplied each day and advice is given in special cases which come to the attention of the department.
25. No.
26. No.
27. ——
28. A Plant Restaurant is operated where good wholesome food can be obtained at a nominal cost. Most of our employes bring their lunches in baskets.
29. The food provided in the company lunch rooms is bought and prepared under careful supervision. We attempt no supervision over the home.
30. In some of our larger plants the company has established restaurant service, where wholesome food is served at a nominal cost. A restaurant and cafeteria for employes is under consideration for the new office building.
31. In plant, there is a cafeteria under Company's supervision
32. The company has a lunch room for its clerical force, but no supervision is exercised over the food of hourly men either in plant or at home.

33. No.
34. Attempt to serve good food at cost prices.
35. None.
36. No.
37. No.
38. No.
39. ——
40. Almost without exception, no.
41. ——
42. No, but we maintain a lunch room giving clerks reduced rates for the food consumed. This food is served by a reliable caterer.
43. ——
44. No.
45. Not unless (as is often the case) our doctors give advice regarding diet to employes who may come to them or employes who are directed to report to them.
46. No.
47. No.
48. Yes.
49. Do not attempt to exercise any supervision over employes' food in plant or at home.
50. Seldom.

No. 125

Do you attempt in any way to inculcate in the minds of your employes that "good health makes for better efficiency"?

1. Yes.
2. Yes.
3. Yes, by notices at short intervals.
4. Yes.
5. Through our safety bulletins.
6. ——
7. In no organized way.
8. ——
9. Yes. By booklets and cards distributed in the pay envelopes.
10. ——
11. Yes.
12. See pamphlet distributed to all employes.

13. Through occasional talks to them in groups.
14. Through our men's and women's relief organizations. Through a little booklet, "Health Hints."
15. We believe this is self-evident, and therefore do not conduct classes, hold lectures, or distribute leaflets.
16. Yes.
17. Yes. Lectures, etc.
18. Yes.
19. Yes. We preach this at frequent intervals.
20. No.
21. Yes, by use of safety bulletins.
22. No.
23. No.
24. Yes, in the Traffic Department School by means of lectures.
25. No.
26. Yes, in every possible way, by conversation and encouragement to keep proper health.
27. ——
28. Yes, through our factory newspaper.
29. Through providing excellent working conditions.
30. Yes.
31. Yes, by direct instruction at time of physical examination and by monthly "Health Bulletins," published in employes' newspaper.
32. Not at present, but we strongly believe that much good would result from such a procedure.
33. Not particularly.
34. Yes, by health lectures and personal talk of Service Director. This is especially emphasized in our class work. Here it is brought home to them by citing actual cases.
35. No.
36. Yes.
37. Yes.
38. Yes.
39. ——
40. Only through magazine articles mentioned.
41. Yes, by instruction.
42. Yes, occasionally get out a circular written by one of our doctors.
43. ——

44. Only in a very general way.
45. Yes.
46. Yes, through the semi-monthly shop paper.
47. Yes.
48. Yes.
49. Yes, in occasional health talks at noon-day meetings.
50. Yes.

No. 126

What rules and regulations have you for conservation of the health of your employes?

1. ——
2. None, except physical examination when entering the employ of the company.
3. See Form 3.
4. Medical examination once a year, medical dispensary, clinic. Educational booklets on health, hygiene, etc. Copies enclosed. See also bulletin article.
5. Only as covered by safety regulations.
6. ——
7. None.
8. ——
9. None.
10. ——
11. No spitting except in cuspidors. Shop carefully swept with dustbane. Exhaust system.
12. See 125.
13. Close observation of the number of hours they work. Excuse from departments whenever required.
14. Simple ones are given in above booklet.
15. The health of employes is apt to reflect working conditions.
16. Answered under No. 123.
17. None.
18. Strict rules against use of intoxicants and of tobacco by apprentices, especially cigarettes.
19. None.
20. None.
21. Everything is done to make the surroundings sanitary.
22. None.

23. No.
24. No specific rules.
25. No.
26. ——
27. ——
28. (1) Spitting on the floor is prohibited; (2) Men working in lead are required to wash up and be frequently examined; (3) One day rest in seven; (4) Short hour shifts (majority eight hours).
29. ——
30. Use of individual drinking cups is enforced, intemperance in every form is discouraged and the necessity of maintaining good health is urged upon employes as one of the most important means of attaining efficiency and hence advancement in the service. Heads of departments and their assistants are constantly on the watch for any signs of failing health on the part of employes, and employes who show any sign of impaired health are at once placed under the observation of the company physician. After employes on the monthly payroll have been in the service for a period of six months they are entitled to one week vacation; after they have been in the service for a period of one year or more they are entitled to a vacation of two weeks every year. In certain departments that are unusually busy during the summer vacation period, the employes have the privilege of deferring their vacation until the winter and early spring months, during which period they are granted a three weeks' vacation. The company physician, visiting nurse and others delegated for this purpose, instruct employes in matters of ventilation, sanitation, personal hygiene, etc.
31. No contagious diseases allowed in the shop. Systematic search for and elimination of source. Vaccination against smallpox and typhoid offered.
32. Practically none.
33. Usual rules.
34. None.
35. None.
36. None.
37. No rules, but general care.
38. None.

39. ——
40. Ordinary sanitary rules is about all.
41. ——
42. When the periodical health examination shows any disease threatening, the clerk is watched and occasionally called in for a further test.
43. ——
44. In a department where lead and similar materials are used our rules are plain and complete, requiring care and cleanliness.
45. Yes.
46. None.
47. We have no rules.
48. No written general rules. An occasional article in our factory paper.
49. No written rules or regulations.
50. Regulations regarding the weight of clothing worn in winter is about the only rule we have, but we talk *health* constantly, suggesting and advising the best way to live.

No. 127

Does your company employ physicians for the examination of officers and employes?

1. Only for employes.
2. Yes.
3. No. Male and female nurses under doctor's supervision when needed.
4. Yes.
5. Yes.
6. Yes—only for new employes.
7. We do not examine employes except at their request.
8. Yes.
9. No.
10. Yes.
11. Yes.
12. Only when application is made to join our Mutual Aid Society or when special occasions make it desirable.
13. One physician comes to the store two afternoons a week to examine and prescribe for all who desire or need it.

14. There is a visiting physician, but he is not in our employ. We do not believe in a *company* physician.
15. Yes.
16. Yes.
17. No.
18. No, but may later.
19. No, but we expect to shortly.
20. No.
21. Yes.
22. Yes, for cases of accident and emergency.
23. No.
24. Yes.
25. No.
26. No, only in case of injuries.
27. ——
28. Yes. All factory employes. Officers are not examined.
29. Yes.
30. Yes.
31. Yes, one physician, one graduate nurse.
32. No.
33. Yes.
34. Experimental physical examinations under direction of New York Board of Health.
35. No.
36. Yes.
37. Accidents only.
38. Yes.
39. ——
40. Only in connection with accidents and sickness which come within the scope of the usual hospital plan organizations of railroads.
41. Yes, a large staff.
42. Yes, one, in addition to which our general medical staff is used.
43. See story in June, 1914, number of the Bulletin.
44. No.
45. Yes.
46. No.
47. Yes.
48. Yes.

49. No.
50. Yes.

No. 128

If so, does your physician make all examinations?

1. Yes.
2. Yes.
3. ——
4. Yes.
5. Yes.
6. Yes.
7. Yes.
8. Yes.
9. ——
10. Yes.
11. No. Consultations often held. Some patients sent to hospital for examinations.
12. Yes.
13. No examinations are compulsory.
14. He makes such as the employes desire. It is optional whether they go to him or their own doctor. Such examinations are the result of a visit to the clinic for advice or treatment.
15. Yes.
16. Yes.
17. ——
18. ——
19. ——
20. ——
21. Yes.
22. ——
23. No.
24. Yes.
25. No.
26. ——
27. ——
28. Yes.
29. Yes.
30. Yes.

31. Yes.
32. See answer to 127.
33. Yes.
34. ——
35. ——
36. Yes, at the plant.
37. ——
38. Yes.
39. ——
40. No.
41. Yes, as far as the physical side is concerned.
42. All periodical examinations, yes.
43. See story in June, 1914, number of the Bulletin.
44. ——
45. Yes.
46. ——
47. Yes.
48. Yes.
49. See 127.
50. Yes.

No. 129

If not, are the certificates of private physicians accepted?

1. ——
2. No.
3. ——
4. Yes.
5. We have never had occasion to do so.
6. ——
7. Company physician's examination is not a requisite of employment.
8. No.
9. Benefit Society employs two physicians to attend its 2,000 members if ill. Company employs one physician, part time.
10. ——
11. In most cases.
12. No, unless verified by reports from our own physician.
13. None required.
14. We do not require any certificate unless in case of contagious disease.

15. We prefer to have the attention of the company's physician.
16. ——
17. ——
18. ——
19. We do not require them.
20. ——
21. No.
22. ——
23. ——
24. See above.
25. No.
26. ——
27. ——
28. No. Must be examined by plant physician.
29. ——
30. No.
31. No.
32. See answer to 127.
33. A number of doctors are employed and only their examinations are accepted.
34. ——
35. ——
36. Yes, at the district offices.
37. ——
38. Never, except for vaccination.
39. ——
40. Certificates not required except in certain special cases.
41. Yes, when the physicians are of the proper character.
42. ——
43. See story in June, 1914, number of the Bulletin.
44. Yes, though usually we have our own private investigations.
45. Decidedly not in case of employment. Almost always in case of illness of employes.
46. ——
47. Not so far.
48. No.
49. ——
50. No.

No. 130

Are company physicians allowed to have private practice among employes?

1. Yes.
2. Yes.
3. ——
4. No.
5. Yes.
6. Yes—but not for accidents or illnesses originating in the mill; in many cases our employes were patients of the doctor before he was retained by the mill about four years ago.
7. Absolutely no.
8. Employes taken care of by hospital physicians, the latter are allowed private practice with others.
9. Yes.
10. No.
11. Yes.
12. Yes.
13. Yes.
14. We have, strictly speaking, no company physician. The visiting physician is not in our employ. He is chosen by our Men's Benefit Association and is not paid by us.
15. Yes.
16. Yes.
17. ——
18. ——
19. ——
20. ——
21. Yes.
22. Yes.
23. ——
24. No.
25. ——
26. ——
27. ——
28. Yes. Outside of working hours. Cannot make calls (private) during hours of employment.
29. We make no attempt to regulate the private practice of the

company physician. He is free to sell his services to any employe who may request them if he so desires.
30. No rule against it, but our physicians do not seek it.
31. No.
32. Yes—if the employes visit them voluntarily.
33. In some cases yes.
34. Have no company physician.
35. ——
36. Yes, but not in office hours.
37. No instructions.
38. No.
39. ——
40. Yes.
41. No.
42. No case of this kind has ever come to our attention.
43. No.
44. ——
45. Not our home office staff, as they are "all time" men on salary. Our field examinations are on a fee basis and often have private patients among our employes.
46. ——
47. No.
48. It is left entirely to choice of employes.
49. Have none.
50. Yes.

No. 131

Are all persons entering your services given a physical examination and are physical examinations made at stated periods?

1. Only when hired for some special reason.
2. All except the higher officers. Re-examinations are not made except in special cases.
3. No.
4. Yes.
5. Examinations given all who enter employ, except those who re-enter within two months after leaving. No periodic examinations are made.
6. Yes, although physical examinations are not made at stated periods. Special examinations are made, however, on the

request of employes or at the suggestion of the superintendent.

7. No.
8. In mechanical or operating department, all above rank of laborers. No examination for clerks, etc.
9. Not as yet.
10. Yes.
11. No.
12. No. Test for sense of smell made periodically on all employes of the fitting department.
13. No.
14. No.
15. Before being employed, every applicant is given a physical examination. Subsequent examinations are given only where the need is apparent.
16. Yes.
17. No.
18. No.
19. No. We do not require a physical examination.
20. No.
21. Yes. (Sample.) No periodical examination.
22. No.
23. No.
24. Physical examination for all new employes—no stated period for further examinations.
25. No.
26. No.
27. ——
28. All factory employes are required to take the physical examination. Those who have special cases, such as hernia, etc., are followed up by plant physician.
29. All new employes must pass a physical examination. Examinations thereafter are given only as individual cases may demand.
30. All new employes have to pass a physical examination. We have semi-annual inspections of all employes by our physicians.
31. Yes.
32. No.
33. No.

34. No. Only examination ever conducted is an experimental one, being conducted at the present time.
35. No.
36. (1) No. (2) No.
37. No.
38. Physical examination on entering, but none at stated periods.
39. ——
40. Only in special classes of work.
41. Generally yes, on entering the service, but periodic examinations thereafter are not given except in special cases or as may be required.
42. Yes.
43. Yes.
44. No.
45. Yes, see memo attached.
46. No.
47. Yes. (This plan goes into effect April 1st.)
48. Yes.
49. No.
50. Examinations are made upon entering our employment, and again after an absence due to illness.

No. 132

If so, indicate briefly the scope and thoroughness of such examinations

1. Same as insurance examinations.
2. Examination for organic, infectious or contagious diseases, deformities, ruptures, etc.
3. ——
4. Very thorough examination of same character as that given to applicants for life insurance policies.
5. See form M. D. 358.
6. ——
7. ——
8. Very thorough.
9. ——
10. See sheet.
11. ——

12. As above.
13. ——
14. ——
15. Candidates for admission to the Employes' Benefit Association for health insurance are accepted on the physical examination given at the time of employment. Our examination is much the same as the average life insurance examination.
16. Usual physical examination.
17. ——
18. ——
19. ——
20. ——
21. Sample.
22. ——
23. ——
24. See blanks attached.
25. ——
26. ——
27. ——
28. See physical examination card.
29. The initial examination.
30. Men are thoroughly examined for lung and heart lesions, hernias, varicosities and diseases of the mouth. (Examination blank enclosed.)
31. As complete as life insurance. Urine analysis and blood pressure in cases over forty years.
32. No.
33. ——
34. ——
35. ——
36. Only those employes joining the Relief Department are examined. See question 134.
37. ——
38. Normal eyesight, freedom from contagious diseases, and general health, depending on position to be filled.
39. ——
40. In train service thorough examination as to physical fitness, correct eyesight and hearing is required.

41. Examinations are practically equivalent to those required by the insurance companies.
42. Principal organs of the body are examined and blood pressure taken.
43. ——
44. ——
45. Very thorough. See memo attached.
46. ——
47. Cover a complete physical examination.
48. A thorough physical examination is made with special attention given to all venereal diseases. None allowed to enter.
49. See 131.
50. Am enclosing a card indicating the nature of the examination.

No. 133

Do you employ a trained nurse?

1. No.
2. Yes.
3. Yes. Two, male and female.
4. Yes, a number of them.
5. Our works hospital has a trained attendant who gives first aid treatment to all injured. No protracted cases are cared for in the shop hospital.
6. Yes.
7. We have a male nurse in our main hospital and two in the branch hospitals.
8. In hospitals, yes.
9. Yes.
10. No.
11. Yes.
12. No.
13. No. A social secretary attends to the simplest needs of those in the store on the days the doctor is absent, and reports all special cases, receiving instructions what to do.
14. Yes.
15. Yes.
16. No.
17. Yes.

18. ——
19. No.
20. No.
21. Yes.
22. Yes, on physician's staff.
23. No.
24. Yes.
25. No.
26. No.
27. ——
28. Yes.
29. Yes.
30. Yes.
31. Yes.
32. No.
33. Yes.
34. Yes.
35. No.
36. Yes.
37. No.
38. Yes.
39. ——
40. Only in connection with our hospital departments.
41. Examinations are practically equivalent to those required by the insurance companies.
42. Yes.
43. Yes.
44. No.
45. Yes.
46. No.
47. Yes.
48. Yes, two.
49. No trained nurse—a matron in each girls' department.
50. Yes.

No. 135

What is your basis of rating?

1. ——
2. Physician's judgment as to fitness of applicant is the only rating given.

3. ——
4. ——
5. We have no basis of rating (if we understand the question correctly). All men accepted by our physician stand on the same general footing, each man being paid the standard rate for the work he does.
6. ——
7. ——
8. ——
9. ——
10. ——
11. ——
12 ——
13. ——
14. ——
15. Answered by reading blanks.
16. Too indefinite for answer.
17. ——
18. ——
19. ——
20. ——
21. For new employes—Are either acepted or rejected.
22. ——
23. ——
24. Employes are accepted if they are in ordinary good health, with reasonable probability of its continuation.
25. ——
26. ——
27. ——
28. A—Excellent, B—Good, C—Fair, D—Poor.
29. ——
30. The company physician uses his own best judgment in accepting or rejecting the applicant, giving due consideration to the class of work at which the applicant desires employment.
31. ——
32. No.
33. ——
34. ——
35. ——
36. Do not understand this question.

37. ——
38. Depends on position to be filled.
39. ——
40. Ditto.
41. ——
42. ——
43. ——
44. ——
45. ——
46. ——
47. ——
48. ——
49. See 131.
50. ——

No. 136

Does your medical examination serve only as a basis of rejection, or is it used to more properly place a man for his work?

1. Basis of rejection.
2. Primarily to place more properly a man.
3. ——
4. Both. But annual examination can never be made a basis of dismissal.
5. Both. Men having certain weaknesses may be safely employed in some departments.
6. Used more properly to place a man for his work—it is very seldom the basis for rejection.
7. No medical examination—but if we had one it would be to more properly place a man in his work.
8. Former only.
9. ——
10. ——
11. ——
12. See 127.
13. There is only occasional medical examination.
14. Such examination as we carry out supplemented by careful observation is used to more properly place an employe.
15. Both—for men and women.
16. Both.

17. ——
18. ——
19. ——
20. ——
21. So far used for rejection or acceptance only.
22. ——
23. ——
24. Both.
25. ——
26. ——
27. ——
28. It is used for both purposes, but more particularly for the proper placing of prospective employes.
29. As a basis of rejection.
30. The medical examination is used as a basis of rejection in the case of new applicants who do not come up to the requirements of our physical standard; it is also of service in helping us to assign old employes to work more suited to their physical condition.
31. First examination on basis of rejection. Second, complete examination to more properly place man for his work.
32. No.
33. Only as a basis of rejection.
34. The physical examination has been conducted simply as an experiment, to ascertain if the deficiencies and ill health of an individual were corrected, would his efficiency increase.
35. ——
36. Serves to determine if he is eligible to membership in Relief Department—has nothing to do with his work.
37. ——
38. Both.
39. ——
40. For basis of rejection only.
41. Use only as a basis of rejection.
42. Only for rejections. If the applicant is not physically acceptable, he or she is not put to work.
43. Yes.
44. ——
45. ——
46. ——

47. Is intended at this time to apply only as the basis of rejection.
48. Yes, more properly to place him.
49. See 131.
50. First as a basis of rejection, and it has been consulted when considering the placement of employes.

No. 137

What percentage of the men whom you examine do you reject?

1. Very few. Do not hire them or send to doctor unless appear sound.
2. About one per cent.
3. ——
4. About thirteen per cent.
5. A very small percentage. We have employed but few men since examinations were adopted.
6. Very small percentage. In the last six months have rejected three—two account scabies and one account disease.
7. About two per cent. of the men examined for membership in the Benefit Society are rejected or required to sign waivers for such physical defects as rupture.
8. ——
9. ——
10. ——
11. ——
12. See 127.
13. ?
14. No compulsory examination by physician. Employment manager uses his judgment on new employes.
15. One per cent. of women. Cannot state percentage of men accurately. We haven't determined definitely on policy. Very few rejections.
16. About eight per cent.
17. ——
18. ——
19. ——
20. ——
21. Not at it long enough to form an idea.
22. ——

23. ——
24. About fifteen per cent.
25. ——
26. ——
27. ——
28. ——
29. Figures for eighteen months ending May 20, 1914:
    New employes examined.......... 2,680
    Rejected 65
30. A considerable number of the applicants interviewed never reach the company physician, but are rejected in the employment bureau because of obvious physical disabilities which make further examination on the part of the company physician unnecessary. Out of about 15,000 applicants interviewed during the last calendar year, approximately 500 were rejected for reasons of physical unfitness or disability. Out of 1,500 applicants accepted by the employment bureau and hired last year, 59 were rejected by the company physician.
31. About one-tenth per cent.
32. No.
33. ——
34. ——
35. ——
36. See reply to question No. 136, the answers to which make void these questions.
37. ——
38. Ten per cent.
39. ——
40. I don't know.
41. Approximately ten per cent.
42. Negligible percentage. I have had last year, out of 123 people employed, one person rejected.
43. ——
44. ——
45. Fifteen to sixteen per cent.
46. ——
47. No record yet.
48. Less than one per cent.; small percentage is due to care in selecting by our employment department.

49. See 131.
50. About three per cent.

No. 138

Name general conditions which cause rejection according to your standards.

1. ——
2. Contagious or infectious diseases, organic diseases unfitting a man for employment, such as epilepsy or advanced heart failure.
3. ——
4. Any physical impairment which militates against health and efficiency, e. g., overweight and underweight, heart murmurs, etc. Note question on Form 1145.
5. Rupture, tuberculosis, excessive use of liquor, defective vision.
6. ——
7. Incipient tuberculosis, heart lesions, varicose veins, etc.
8. ——
9. ——
10. ——
11. ——
12. See 127.
13. Lack of physical strength, untidiness, lack of experience, unattractive personality.
14. We would reject a man with tuberculosis, whenever discovered, unless an old employe or disease contracted in our employ. No set rule for other defects. We employ some blind and maimed, if not likely to become a burden later.
15. Obvious ill health, deformity, pronounced goitre, hernia, specific disease, an infection such as tuberculosis, cancer, cardiac disease, loss of a limb, total deafness, poor vision which cannot be remedied. Low grade of mentality.
16. Physical defects.
17. ——
18. ——
19. ——
20. ——
21. ——

22. ——

23. ——

24. Infectious diseases, physical deformities, which would unfit them for work; any troubles which would be likely to cause frequent disability.

25. ——

26. ——

27. ——

28. Hernia; very poor eyesight, if not corrected by glasses; poor heart. Any disease that would be contagious, etc.

29\.

Heart diseases	18
Tuberculosis	32
General unfitness	15
	65

30. General conditions causing rejection by the company physician are:
    1. Defective vision in certain positions where poor eyesight might easily result in accidents to persons, property, or both.
    2. Lung or heart diseases, hernias, diseases of the nervous system, etc.
    3. Applicants who are crippled or deformed in such a manner as to impair their efficiency.

    General conditions causing rejection by the employment bureau, aside from lack of training, unsuitable age, or lack of technical fitness for the task, are:
    1. Insufficient knowledge of the English language.
    2. Illiteracy.
    3. Bad record.
    4. Personal appearance.

31. (1) Active disease, (2) contagious disease, (3) gross, incurable defect.

32. No.

33. Poor eyesight or hearing and deformation.

34. ——

35. ——

36. See reply to question No. 136, the answers to which make void these answers.

37. ——

38. Contagious disease, very faulty eyesight, badly maimed.
39. ——
40. Failure to meet examination.
41. Heart disease and hernia, for the greater part.
42. Weak lungs generally.
43. ——
44. ——
45. Any impairment serious enough to justify rejection if applying for life insurance, and, if anything, our examination is more severe than our examination for insurance.
46. ——
47. Not recorded yet.
48. Venereal, tuberculosis, cigarette fiends, and general physical disability for task sought.
49. See 131.
50. Specific diseases, symptoms of contagion or other ailments which would interfere with the proper performance of his duties.

No. 139

How compulsory are your recommendations to the employes who need trusses, glasses, or to take some definite steps for physical betterments?

1. Absolutely.
2. Not compulsory, but in a kindly way they are urged to get needed appliances. Sometimes the company through its Welfare Department advances funds if necessary.
3. ——
4. We take up at the time of examination all physical impairments found and impress upon the employe the necessity for the need of medical or surgical treatment.
5. Compulsory for employment.
6. Such recommendations as have been made have always been followed exactly.
7. Our Welfare Department would recommend for dismissal any man who would refuse to secure such appliances as the doctor ordered.
8. Very strict regarding eyesight of train men.
9. ——

10. ——
11. ——
12. Doctor's orders must be complied with. Company furnishes trusses, etc., under certain conditions..
13. Not compulsory.
14. Not compulsory. We advise but stop there.
15. We have experienced no difficulty in this direction.
16. Must be obeyed.
17. ——
18. ——
19. ——
20. ——
21. We recommend.
22. ——
23. ——
24. In the case of applicants, they are not employed. In the case of present employes, sick benefits may be discontinued in such cases, but such action is only taken in extreme cases and after consideration by the benefit committee.
25. ——
26. ——
27. ——
28. In cases where the above recommendations are advised, and they are very pronounced, the employes are required to take immediate steps to remedy same, or they will not be allowed to continue their work.
29. If any such recommendations are necessary for the applicant's fitness for work, they must be carried out before the applicant will be accepted.
30. Not allowed to enter the service unless properly fitted.
31. Not quite absolute but nearly so.
32. Company goes no further than the physician's advice to the employe.
33. They are not compulsory so far.
34. Not compulsory at all, but we endeavor to make them see the advisability of such measures.
35. ——
36. See reply to question No. 136, the answers to which make void these questions.

37. We urge the use of glasses when it appears necessary to relieve eye strain.
38. Must accept physician's recommendations or are not put to work.
39. ——
40. Must come up to the requirements or cannot be employed.
41. After recommendations are made by the medical staff the responsibility for carrying out of same rests with employing officer and immediate superior.
42. We generally refer them to a specialist, but we do not make it compulsory on the part of the clerk to make use of his services.
43. ——
44. ——
45. See memo attached.
46. ——
47. Not decided.
48. Absolutely compulsory.
49. See 131.
50. We make it absolutely essential that they act upon our physician's recommendations and see to it that the needed aid may be secured at the least possible cost.

No. 140

Do you carry on systematic follow-up work to see if your recommendations are carried out?

1. Yes.
2. Yes, through nurses and foremen.
3. ——
4. Yes.
5. Men must be re-examined on the points raised at first examination before being admitted.
6. Yes.
7. Yes.
8. ——
9. ——
10. ——
11. ——
12. We see that they are complied with.

13. Only in a friendly way—not according to a system.
14. Not systematic. We endeavor to help those who wish to help themselves.
15. Through the company's physicians and nurses.
16. Yes.
17. ——
18. ——
19. ——
20. ——
21. Yes.
22. ——
23. ——
24. Yes.
25. ——
26. ——
27. ——
28. Yes. This is handled by the plant physician, who re-examines the employes as often as their case warrants.
29. Employes to whom necessary recommendations are made are requested to report to the doctor at such times as he may appoint.
30. Yes, through our employment bureau records.
31. Yes.
32. No.
33. Generally no.
34. Yes.
35. ——
36. See reply to Question No. 136, the answers to which make void these questions.
37. Yes.
38. Yes.
39. ——
40. Employes in train service being examined from time to time.
41. This responsibility rests with the immediate superior of the employe in question.
42. Only by personal observation and the case would again be brought to our attention at the next periodical examination.
43. ——
44. ——
45. See memo attached.

46. ——
47. Not decided.
48. Yes.
49. See 131.
50. Yes.

No. 141

What is the attitude of your employes toward the physical examination?

1. They are for it, as all contribute part of funds for Benefit Department.
2. Kindly disposed.
3. ——
4. It has received their cordial co-operation.
5. Friendly.
6. O. K.
7. We have no means of knowing what their attitude would be towards physical examination if made a condition of employment. From our experience in examining for membership in the Benefit Association we do not believe that they would make serious objections.
8. No objection.
9. ——
10. ——
11. ——
12. Good.
13. ——
14. Not compulsory, so no objections possible so far as we are concerned.
15. Ready compliance.
16. Naturally would rather not submit to it.
17. ——
18. ——
19. ——
20. ——
21. Unions oppose, others in favor of.
22. ——
23. ——
24. Satisfactory.

25. ——
26. ——
27. ——
28. When first introduced they were rather opposed to it. They now take it as a matter of routine, and very often we are heartily thanked by employes who have been shown their physical defects and followed the recommendation of the physician.
29. Accepted, as a part of the organization plan, without comment.
30. Some were inclined to be skeptical and critical at first. It is safe to say that practically all of our employes now recognize the value of our physical inspection service in keeping them informed as to their physical condition and in safeguarding them from association with others not in good physical condition.

    (NOTE: Sub-heads, assistants, foremen, etc., in various departments are required to keep a close daily inspection of the men working under them with the view of detecting any falling off in the health of employes. Men who show signs of impaired vitality, or who have a persistent cough, or whose health appears to be in any way affected, are promptly ordered to report to the company physician for examination. In this way we are able to prevent many of our employes from being laid up with some serious illness and in some cases the employe, upon the physician's advice, is transferred to work more suitable to his condition, or is given a leave of absence until his health is restored.)
31. Favorable.
32. Have not gone far enough into the proposition to form a satisfactory opinion.
33. Not favorable as a rule.
34. Very good as far as experiment has gone.
35. ——
36. See reply to question No. 136, the answers to which make void these answers.
37. ——
38. Generally friendly.
39. ——
40. It is the usual custom and accepted accordingly.

41. Did not take kindly to same at first, but now we have no difficulty in this matter, employes taking the same as any other regulations of the company service.
42. Only two people out of 922 examined refused to be examined by our doctor.
43. ——
44. ——
45. ——
46. ——
47. Will not know until the plan is put into effect.
48. They now accept it gladly as a safeguard to themselves and family.
49. See No. 131.
50. They know there is no alternative if they wish to work with us. We explain to them the protection this examination means to them. We hear of few objections.

No. 142

Are your employes kept under records?

1. Yes.
2. Some are, such as members of selling force. Other records are now being installed.
3. Yes.
4. Yes.
5. Yes.
6. Yes.
7. No.
8. Forms Nos. 1230 and 1231 enclosed.
9. Partial.
10. ——
11. ——
12. Yes.
13. Yes. Employment Record.
    Record of sales. Records of percentage cost of salary of salespeople. Records of errors. Records of time, absence, tardiness, etc.
14. Yes.
15. The office maintains no records relating to the activity of the employes while employed, except a record of the em-

ployes' attendance and punctuality, which is kept by the pay clerk.

16. Performance and employment records for train operatives. Employment records for all others. Departments keep additional performance record for other than train operatives.* (See Question No. 46.)
17. Not complete.
18. Yes.
19. No.
20. Yes.
21. Yes.
22. Yes.
23. Yes.
24. Yes.
25. Only from week to week.
26. Yes, by employment man and time-keeping clock.
27. ——
28. No. We do not keep an individual production record of each employe, that can be referred to at any time.
29. Production records—kept in respective departments. Health records—in health division under medical advisor's supervision. Lateness and absence records—in payroll division, transferred to employment division after employe is discontinued.
30. Yes, see exhibit "C."
31. Yes.
32. Yes.
33. Yes.
34. Yes.
35. ——
36. Yes.
37. Yes.
38. Yes.
39. No, except such records as are made on the employment card and except certain employes in our educational courses.
40. ——
41. Yes.

---

* "Train Operatives" includes all employes identified with the movement of trains, such as: Telegraph operators, levermen, switchmen, yardmasters, etc.

42. To a certain extent, yes.
43. Yes.
44. By foremen.
45. See memo. attached.
46. No detailed records are kept.
47. Yes.
48. Yes.
49. Yes.
50. Yes.

No. 143

Are these continuous as to Discipline, Punctuality, Industry and Initiative?

1. Discipline, punctuality and industry.
2. They will when installed cover these points.
3. Yes.
4. Yes.
5. Initiative.
6. Yes.
7. ——
8. Discipline, punctuality and industry.
9. No.
10. ——
11. ——
12. Yes.
13. ——
14. Yes.
15. ——
16. Yes.
17. Discipline, No; Punctuality, Yes; Industry, No; Initiative, No.
18. Yes, all for apprentices.
19. ——
20. Discipline, punctuality, industry—Yes.
21. No, not at present, but are investigating some such system.
22. Only for apprentices.
23. Discipline, punctuality—Yes. Industry, initiative—No.
24. In the traffic department and large offices a time clock record is kept as to punctuality. Discipline, industry and initiative largely determined by supervision of work.

25. ——
26. No, only in case of serious breach. No formal record is kept on initiative, each department is required to keep some record to use as a basis for promotion.
27. ——
28. ——
29. Punctuality (v), industry (v).
30. Punctuality, attendance and efficiency.
31. Continuous as to punctuality only.
32. Yes.
33. Discipline—We claim to. Punctuality—Yes. Industry—No. Initiative—No.
34. Yes.
35. Punctuality and industry.
36. Discipline, No—Punctuality, Yes—Industry, Yes—Initiative —No.
37. Yes.
38. Yes.
39. Punctuality—No.
40. ——
41. Yes.
42. Punctuality—Yes.
43. Yes.
44. Only as foremen follow them up.
45. ——
46. No.
47. Yes.
48. Yes.
49. Yes.
50. Punctuality—Yes. Industry—Yes.

No. 144

Who makes these records?

1. Based on efficiency and clock records.
2. The employment head in conjunction with the Employment, Education and Welfare Committee.
3. Foreman and superintendent.
4. District superintendents and home office section heads.
5. Employment clerk.

6. Routine records for punctuality and discipline are kept by the labor department—as a matter of routine. Daily report on industry is made to the superintendent, inasmuch as all operatives failing to make bonus are reported to him for investigation; as to initiative the superintendent and the man in charge of the labor department have consulted.
7. ——
8. ——
9. Paymaster makes all that are kept.
10. ——
11. ——
12. Superintendent in each shop. Complete record of all shops in general office.
13. Filed in superintendent's office; auditing department time keeper; social secretary.
14. Department heads.
15. ——
16. Bureau of employment and discipline, except performance records of others than train operatives—the latter being kept in various departments.
17. Doorman.
18. Timekeeping Department.
19. ——
20. Cost Department.
21. Shop office accounting and superintendent's office.
22. Superintendent's clerk for apprentices. Cashier for other general statistics.
23. Foremen.
24. In the Traffic Department and large offices punctuality records are made by the individual employes.
25. Bonus clerks.
26. ——
27. ——
28. ——
29. See No. 142.
30. Sub-heads, assistants, foremen, chief clerks and others in charge of comparatively small groups of employes; ratings and markings subject to the review and approval of the head of department. They are then forwarded to the employment bureau for record.

31. Timekeepers of the different departments.
32. Different bureaus keep the records in the different departments.
33. The clerks.
34. Discipline—executive in charge. Industry—executive in charge. Punctuality—time clock. Initiative—observation of executive in charge.
35. Regular system of reports which are posted daily.
36. 2 and 3 under 143 are obtained from Payroll Department.
37. Foremen and office.
38. Employment Department for factory. Office manager for office.
39. In the ordinary case the only records are made by the employment officer.
40. ——
41. The immediate superior officer.
42. Kept by the employment bureau.
43. Office workers.
44. The foremen.
45. ——
46. ——
47. The various departments are organized to cover these details.
48. Clerk to foreman for lates and absentees. Foremen for discipline.
49. Department managers.
50. A record of the sales is kept in the main office by the auditors, as is also the time record.

No. 145

Are they valuable?

1. Yes.
2. Yes.
3. Yes.
4. ——
5. Only for term of service, shop experience, reason for leaving employment, etc.
6. We feel that these records are valuable, both for our own information and for the reason that the employes knowing

that they are kept, are impelled to do that which they otherwise would not do, perhaps, and to refrain from doing that which they otherwise would do.

7. ——
8. ——
9. Yes.
10. ——
11. ——
12. Very.
13. Yes.
14. Yes.
15. ——
16. Yes.
17. Yes.
18. Yes.
19. ——
20. Yes, because they give us a line on our men for future reference.
21. Apparently, yes.
22. Yes.
23. Yes.
24. Yes.
25. Yes.
26. Yes, as they serve as a basis for promotion.
27. ——
28. ——
29. Yes.
30. Yes. These records are used by the Employes Committee, which passes upon the recommendations of Department Heads for promotions or increases in pay.
31. Yes.
32. Yes, very.
33. Yes.
34. Yes.
35. Yes.
36. Yes and no—depends upon circumstances.
37. Yes.
38. Yes.
39. A complete record of each employe in an industry such as ours, would, in my opinion be of little value.

40. ——
41. Yes.
42. We consider them in connection with our review of a clerk on his anniversary date for increase.
43. Yes.
44. Not particularly.
45. ——
46. ——
47. No, the only time an executive of the company passes on the promotion of an employe is in the case of its being impossible to accurately grade him as to the amount and quality of work done.
48. Yes.
49. Yes.
50. Yes.

No. 146

Have you any executive or committee to keep these, supervise them and pass upon promotional merit of employes therefrom?

1. No committee except foreman of men, general foreman and head of employment department.
2. Employment, Education and Welfare Committee.
3. Manager and superintendent.
4. Yes.
5. No.
6. Labor Department brings them up to the attention of the superintendent.
7. ——
8. ——
9. No.
10. ——
11. ——
12. They are referred to frequently for various reasons. For promotion always.
13. Yes.
14. Yes.
15. No.
16. It is the practice to promote employes whenever possible—it naturally follows that supervision is necessary to determine fitness for promotion.
17. No.

18. Works supt.
19. ——
20. No.
21. We will have.
22. Yes, to a limited extent.
23. Supt.
24. No. These matters are handled by each department.
25. No.
26. These are only used supplementary and assist in promotions, method being as outlined before.
27. ——
28. ——
29. See No. 142.
30. Yes. The Employes Committee which is a sub-committee of the Advisory Committee, composed of Heads of Departments. The Superintendent of Employment acts as Secretary of both committees.
31. No.
32. Promotion is based partially upon these records.
33. No.
34. Service Director supervises these records.
35. No.
36. No.
37. No.
38. Yes.
39. No.
40. ——
41. Yes.
42. ——
43. Yes.
44. ——
45. ——
46. ——
47. No. The only time an executive of the company passes on the promotion of an employe is in the case of its being impossible to accurately grade them as to the amount and quality of work done.
48. Supervisor of employment and education.
49. Office manager.
50. Board of Directors.

QUESTIONAIRE ON EDUCATIONAL AND EMPLOYMENT PLANS

SALES DIVISION

Of the Questionaires on Educational and Employment Plans submitted by the Committee to members of the Association, twenty-nine (29) were returned to the Sales Division with complete information. These have been classified as follows:

MANUFACTURERS:

1. Manufacturers of Electrical Apparatus.
2. Manufacturers of Machinery.
3. Manufacturers of Women's Apparel.
4. Public Service Company.
5. Manufacturer of Machinery and Tools.
6. Manufacturers of Machinery.
7. Manufacturers of Women's Apparel.
8. Manufacturers of Electric Machinery.
9. Manufacturers.
10. Manufacturers of Novelties.
11. Metal Manufacturers.
12. Hardware Manufacturers.
13. Manufacturing Company.
14. Manufacturers of Machinery.
15. Woodwork Manufacturers.

SPECIALTY COMPANIES:

1. Retailers.
2. Automobile Manufacturers.
3. Specialty Manufacturers.
4. Automobile Manufacturers.

INSURANCE COMPANIES:

1.
2.

SERVICE COMPANIES:

1.
2.
3.

RAILROAD COMPANIES:

1.

Printers and Publishers:

1.
2.
3.

Retail Stores:

1.

In order that the greatest good may be derived from the information contained in the Sales Division of the questionaire, it has seemed best to give the replies to each question in full form. Such an arrangement will allow a much more liberal study of such sales problems as are under discussion, and will allow for more original and pertinent deductions by members of the Association.

WHAT ARE YOUR PARTICULAR SALES PROBLEMS?

Manufacturers:

1. The development through application of proper markets for power apparatus; merchandising of utility devices for the utilization of electricity.
3. No particular sales problems.
4. To classify salesmen into several divisions so that they can properly cope with the varied sales problems that develop in our business.
5. To extend the business at home and abroad through regular agents and branch houses.
6. Convincing prospective customers of the superiority of our product and getting orders.
7. Promotion of nationally advertised articles in competition with special brands.
8. Principally to keep up prices in the face of a rapidly declining market.
9. Trying to get the jobber to exploit our trade-named goods rather than his own; also to get his co-operation.
12. To make the salesmen do exactly what we want them to do.
13. To get the widest possible distribution for our goods through dealers. Very few of our lines are handled through jobbers.

15. Impressing the dealer with importance of quality over price.

SPECIALTY COMPANIES:

1. Service.
3. Hiring new men, training new men, and educating older men.
4. Getting salesmen of sufficiently high class personality and brain capacity who will cover the territory effectively.

INSURANCE COMPANIES:

1. Getting the right kind of man in the right place.

SERVICE COMPANIES:

2. Trying to persuade owners of isolated plants to remove them and use our service; competing with gas, oil and other illuminants; persuading people to use electrical appliances and devices who are now using other forms of energy.
3. Illumination, power and getting on our mains appliances which consume current.

RAILROAD COMPANIES:

1. Determination and establishment of equitable rates for freight and passenger service.

PRINTERS AND PUBLISHERS:

2. Fool competition by competitors who either have no cost records or erroneous ones, and who quote below rational rates.
3. Selection and training of salesmen who are appointed and whose work is promoted by correspondence.

RETAIL STORES:

1. The hardest is to get concentrated effort from the salespeople, principally because the biggest per cent. are girls who, because they regard their position as temporary, are not over-ambitious.

WHAT FOUNDATIONAL QUALIFICATIONS MUST CANDIDATES FOR SALES POSITIONS IN YOUR COMPANY POSSESS?

MANUFACTURERS:

1. (a) The usual moral and physical qualifications. (b) A general fundamental engineering education and certain fundamental talents for commercial work.
2. Integrity, intelligence, persistence.
3. A candidate for a sales position must possess good appearance, be fairly well educated, have tact, and must have, or be able to acquire, a thorough knowledge of the under-muslin business and know how to deal with our kind of trade.
4. Technical education preferable. Practical experience in our works; good address; diplomacy. We have had instances where the technical training was very limited and the deficiency made up in the general business-getting ability of the individual.
5. An intimate knowledge of machinery, good address, unquestioned honesty and loyalty to our business.
6. Earnestness, must carry conviction and be impressive.
7. Absolute honesty, sobriety, obedience, capacity for constructive work on a territory. Our salesmen must be experts on corset department problems.
8. Good personality; ability to talk convincingly and some technical knowledge.
9. Education, appearance, knowledge of business, enthusiasm, ability to hold attention.
10. Enthusiasm and intelligent energy.
11. Honesty, sobriety and good education.
12. Youth, enthusiasm, good habits, clear thought, logic and ability to express, persuasively, the knowledge the salesman has of the goods he has to sell and the policies of the company he is representing.
13. Honesty, aggressiveness, good appearance, fair education.
15. Technical knowledge of estimating.

SPECIALTY COMPANIES:

1. Serve customers to their satisfaction; to please.

2. Health, education, personality and appearance.
3. Should possess the commonly accepted requisites of good health, good morals, good appearance, good personality, enthusiasm, determination, tact, resourcefulness, initiative, education, etc., and should as far as possible, have had previous selling experience, preferably in kindred lines.
4. In addition to the ordinary qualifications of a good salesman, the successful motor car salesman must, as a general proposition, be a high class man, more intelligent, better educated, and well able to meet the very best trade. Speaking for our own class of goods, the man who has saved $2,000 to invest in a motor car is. of course, a successful man. A motor salesman must be of a type to influence the mind of this man who has $2,000 to spend.

INSURANCE COMPANIES:

1. Good health, exemplary habits, a clean record.
2. Honesty, sobriety, seriousness, energy.

SERVICE COMPANIES:

1. Honesty, energy, desire for work and rudimentary education.
2. We attempt to employ men who have at least a high school education. Naturally nearly all of the men having the better positions have a technical training.
3. Ordinary qualifications.

RAILROAD COMPANIES:

1. They must be "good getters of business," possessing the qualifications fundamentally requisite in salesmen in other lines of business.

PRINTERS AND PUBLISHERS:

1. Must understand printing, must have a good address and be industrious; must have imagination and be of substantial character. We generally develop our salesmen from other positions in our establishment.
2. Honesty, experience, acquaintance, appearance, tact, initiative, ambition.

3. Excellent working knowledge of English, good judgment, enthusiasm, imagination and good health.

RETAIL STORES:

1. Health, practical education, integrity, regular habits.

WHAT IS YOUR PLAN FOR GETTING IN TOUCH WITH THE RIGHT KIND OF PROSPECTIVE SALES MATERIAL?

MANUFACTURERS:

1. A careful analysis of prospective graduates of engineering schools.
3. No particular plan. We generally hire a man who is an experienced salesman, and perhaps he has had experience in our particular kind of business. We are always developing at least one young man on the sales floor in the house.
4. We secure our material generally from our own organization force. A great majority of our salesmen have had technical education supplanted by practical experience in the shops, home office, and trial periods in territories adjacent to the home office.
5. Mostly developed and trained from among our own force.
7. We select bright boys and train them as house salesmen under the eyes of sales managers.
8. (a) Apprentice System. (b) All applicants are interviewed where possible and available material listed.
10. Training young men in our stores and factory.
11. No definite plan. Our salesmen are largely recruited from young men in the mills and offices, who show indications of ability along proper lines.
12. All applications are given to one man who assorts them and when a new man is needed by any one department he turns over all of the applications to that department. If there are no applications, we advertise.
13. Most of our junior salesmen are recruited from our Branch Offices and General Office at Akron. The small percentage taken on from the outside are usually selected

from business acquaintances of our salesmen and Branch and District Managers.

15. Train them through office.

SPECIALTY COMPANIES:

2. Applications, investigations by our dealers, also make men from college graduates.
3. Study men in clerical and mechanical positions already with the company; have personal interviews with as many voluntary applicants as possible. Advertise for salesmen in newspapers in large cities.
4. This company does not operate its own sales branches. Our problem is to get dealers who in their turn employ the salesmen who actually sell the goods.

INSURANCE COMPANIES:

1. To seek our men through the successful men of our present organization, encourage our salesmen to talk about the advantages of connection with our company and bring other men to the same opinion.

SERVICE COMPANIES:

1. Always have plenty of applications for sales positions. Occasionally advertise for good men.
2. We have a school called the Central Station Institute where we educate men coming to us from colleges and other sources to take jobs we have open.
3. We always have a large number of applicants on our waiting list.

PRINTERS AND PUBLISHERS:

2. Personal inquiry and advertising.
3. A number of our present force have come to us through an outside knowledge of the work, others through the recommendations of those familiar with the requirements. We usually have on file a number of desirable applications. The names of desirable applicants have frequently been obtained from the lists of applicants for newspaper work. In emergency we advertise.

RETAIL STORES:

1. We usually have enough applications on file from which to select good sales material.

WHAT HAS BEEN YOUR EXPERIENCE WITH MEN FRESH FROM COLLEGE AND WITHOUT BUSINESS TRAINING?

MANUFACTURERS:

1. It is necessary for us to give them a comprehensive training in knowledge of our apparatus, of our business systems, general commercial practice. Our results from men to whom we have given this training have been reasonably satisfactory, their development depending largely upon the manner in which we have planned our work of development of the individual and his willingness to work as well as think.
2. Poor.
3. We have had little or no experience with men just out of college. Such a man would have to start at the bottom.
4. We have never placed any individual fresh from college in a selling capacity. Don't think that you would secure any good results from this plan, especially in our line of business.
5. They need a lot of "breaking in."
6. They usually have to pass through a few years of practical training before they are fit for anything.
7. No experience as salesmen, but in executive factory positions, they are the best we get.
8. Good and bad.
10. Not satisfactory.
11. We do not make them salesmen until they have had some business training in offices or mills.
12. Very poor.
13. Extremely good with men from small colleges who have either worked their way through school or gone through on small allowance, and know the value of money. We usually start such men in our offices, give them some training on clerical work and correspondence and then put them out on the sales work.
15. Learn quickly.

SPECIALTY COMPANIES:

2. Make excellent salesmen when proper material is chosen. These men have ability to group things, can meet men, and preserve individuality.
3. Very satisfactory where we can give them proper training in some other position with the company before placing them as salesmen. The same qualities which will enable a young man to successfully complete an educational course in college are of great assistance to him in making a success in the business world.
4. College graduates in our business have not been particularly successful as good automobile salesmen. It needs experience and selling training. We consider the motor car the highest class specialty and therefore it needs the highest class salesman.

INSURANCE COMPANIES:

1. In the past not very encouraging, but with our increased knowledge of a college man's problems we are getting more satisfactory results. The average college man is too theoretical and therefore unfit for business. He also thinks he is pretty well sophisticated when, in fact, he is not, and is apt to stub his toe.
2. They do not make good agents.

SERVICE COMPANIES:

1. No experience.
2. They need some training in our business before they can do the work assigned to them. We are now putting men of this kind through our Central Station Institute.
3. We have very few college graduates in the employ of our company. We usually have to make them over although the college graduate with the right attitude makes the better employe.

RAILROAD COMPANIES:

1. They must spend some time learning the conditions of our PARTICULAR business.

PRINTERS AND PUBLISHERS:

1. Each year we introduce into our organization one or two college men, but they have to have a pretty severe train-

ing before they are of use. About one out of four remain in our organization.

2. Impractical, visionary, not hard-working. Don't take work seriously.
3. We have had very limited experience with material of this kind. Though we believe that the lack of business experience would not be a handicap providing the foundational qualifications were present. Business experience would not offset the lack of any one of those.

RETAIL STORES:

1. No experience.

DO YOU FIND THAT MEN OF SALES EXPERIENCE OR THOSE OF NO EXPERIENCE DEVELOP INTO THE BEST SALESMEN?

MANUFACTURERS:

1. Our principal additions to the sales force have been of men to whom we have applied training in the knowledge of our apparatus. In some instances we have obtained men of sales experience and then acquaint them with our product and our problems. Undecided which plan is best.
2. With sales experience.
3. Men of sales experience naturally develop into the best salesmen.
4. We generally prefer to develop our own men, consequently have not had occasion to employ many with sales experience outside of our organization.
5. Either depending upon the man.
6. This rests with the individual and no rule can be laid out.
7. No general conclusion. Both succeed.
8. Generally we prefer men without previous selling experience. They fall into our methods more readily and usually are more loyal to the company than men who have sold similar apparatus for competitors.
9. Those of no experience best.
10. Those without experience, but possessing necessary qualifications succeed best.

11. We do not make a practice of employing men with sales experience. Our sales force is recruited largely from young men in our offices and mills.
12. This depends upon the position to be filled. Generally speaking, men of some sales experience.
13. We have had poor success with men having previous tire experience. Poor success with the average man of long experience, and the best of success with men who have either had no sales experience or just enough to give them a test of road work. We find that such men are better molded, are easier trained to our way of selling goods.
15. Men with sales experience will not spend the time to learn our business. One startling exception did—a successful insurance salesman—and he is now our advertising manager.

Specialty Companies:

1. With sales experience.
2. Men of no previous experience develop well and are still with us in the majority of cases. Previous sales experience, when men are carefully selected, has proven of big worth.
3. Men with selling experience.
4. Men of sales experience, as a rule, develop into the best motor car salesmen.

Insurance Companies:

1. We prefer men who have had some sales experience. However, we have had some unusual success in training men between 25 and 35 who have had no sales experience.
2. Men of sales experience are the best.

Service Companies:

1. Men of sales experience.
2. Men of sales experience do very well in our lighting salesmen jobs and other jobs of lesser responsibility but where we require a sales engineer we find it difficult to train men in a reasonable time unless they have had a former engineering training as well as sales experience.

3. Depends entirely upon the attitude of the employe. We educate all of our salesmen without regard to previous experience.

PRINTERS AND PUBLISHERS:

1. Special selling experience in other lines is not of especial advantage to us.
2. For immediate results—experienced; for best results in long run—non-experienced.
3. Both classes are found in those who are considered our best salesmen.

RETAIL STORES:

1. Cannot say emphatically that either one always does the best.
   Usually the inexperienced are enthusiastic about the new work and learn to do just as we wish them to.

IF YOU PREFER MEN OF EXPERIENCE, EXPERIENCE IN SELLING WHAT CLASS OF GOODS DO YOU CONSIDER MOST ADVANTAGEOUS?

MANUFACTURERS:

1. Electrical appliances or salesmen handling allied lines to our business such as general machinery equipment.
2. Specialties of different kinds.
3. Men who have sold our class of goods would naturally be the best for us.
4. If we cannot get men of experience in the electrical line, we would prefer men who have had experience in selling some kindred line which naturally would be some other line of machinery.
5. Our own machinery and tools.
7. Any class to women buyers.
11. We prefer to have men trained in our own organization.
12. Men who have had the experience behind the counter in a retail hardware store.
13. Hardware, groceries, etc.

SPECIALTY COMPANIES:

1. No preference.
2. Specialties, such as adding machines, machinery, etc.

3. We consider it advisable to secure men who have sold goods to the retail trade.
4. Salesmen who have sold expensive articles:—bonds, real estate, and the high-class specialties—pianos, victrolas, cash registers, typewriters, adding machines—as a rule make the best motor car salesmen.

INSURANCE COMPANIES:

1. Specialty salesmen are the most versatile, and therefore preferred.
2. Retail salesmen, or those who come into direct contact with the consumer make the best agents.

SERVICE COMPANIES:

1. Specialties.
2. No preference.

PRINTERS AND PUBLISHERS:

2. Same line.

RETAIL STORES:

1. In retail department store.

DOES THE MARKETING OF YOUR GOODS DEMAND TECHNICALLY TRAINED MEN?

MANUFACTURERS:

1. A large percentage of our business demands technically trained men and we feel that the percentage is increasing rather than diminishing.
2. No.
3. No.
4. Yes.
5. Not in the sense of Technical School Training.
6. This is preferable, but not necessary.
7. No.
8. Yes, usually.
9. Yes.
10. No.
11. Yes. This training is now provided by our School for Salesmen.

12. Not necessarily.
13. No.
15. Yes.

Specialty Companies:

1. Not necessarily.
2. Partially.
3. No.
4. Technical training is not necessary but advantageous.

Insurance Companies:

1. Not necessarily.
2. No.

Service Companies:

1. No.
2. For the better positions it would be better if the man had a technical training.
3. Not much.

Printers and Publishers:

1. We do not need technically trained men, but we need men who thoroughly understand the details of the printing business.
2. A salesman with a "think-box" can post himself rapidly enough so as not to make previously technically trained men essential.
3. No.

Retail Stores:

1. Not necessarily, but a technical knowledge of any merchandise makes a better salesman.

HOW CAREFULLY DO YOU EXAMINE INTO THE MORAL SIDE OF PROSPECTIVE SALESMEN?

Manufacturers:

1. The utmost care is exercised in the selection of our men, mentally, physically and intellectually and possible development into the type of man which we desire to represent us. No definite report scheme for checking into these after employment, but a general plan is in vogue to maintain those requisites to the highest possible dedegree.

2. Quite carefully.
3. We do not hire a man without first being sure that he is O. K. morally.
4. We require references and can generally determine from these references the moral side of prospective salesmen.
5. When our men have grown up with us this is pretty well known.
7. Very.
8. A man's appearance generally gives us sufficient line on his morals.
9. Closely.
10. Beyond reference as to character and qualifications, we make no effort.
12. This side is given careful consideration.
13. Very carefully.
15. Very carefully.

SPECIALTY COMPANIES:

1. Very carefully.
2. Very closely.
3. It is necessary for every member of our field force to give a fidelity bond. Those who cannot give fidelity bonds are not retained. This is a very good test of a man's moral standing. We also make inquiry of previous employers along this line.
4. The few salesmen whom we employ are, of course, carefully investigated as regards their moral character.

INSURANCE COMPANIES:

1. Most critically.
2. We go into applicant's past business history ten years prior to application and accept none whose records are not perfect as nearly as can be ascertained by searching inquiry.

SERVICE COMPANIES:

1. By reference from personal acquaintances of candidates for positions.
2. We have found it difficult to determine beforehand the moral character of the applicant but have no difficulty in learning that side of his character after working

for a time. We, of course, prefer to look carefully into their previous records, having a very comprehensive list of questions which we ask to be answered.
3. We demand a high standard of character.

RAILROAD COMPANIES:
1. As carefully as for employes in other branches of our business.

PRINTERS AND PUBLISHERS:
1. Very particularly.
2. Very slightly.
3. When applicants meet the requirements of the position.

RETAIL STORES:
1. Very carefully.

DO YOU INSIST UPON A TRIAL PERIOD BEFORE GIVING GRADUATE SALESMEN PERMANENT POSITIONS?

MANUFACTURERS:
1. Yes. If the man does not measure up to requirements we seek to locate him in such position as he is best able to fill, engineering or works department of our company; otherwise, with some of our customers whose work is of such a nature that his qualifications would seem to fit, and in that way place men in accordance with their qualifications.
2. Yes.
3. We do not put men through a trial period, though, of course, any new man in any position is on trial at the start.
4. Yes.
5. No set method.
6. Yes.
7. No.
8. No.
9. Yes.
10. Yes.
11. No, except that our salesmen are largely recruited from young men in our mills and offices.

12. All salesmen have to prove that they can "make good."
13. No.
14. Our sales force is a small one, and we have never worked out any particular method of training salesmen. We do give prospective salesmen a few weeks training in the shop so that they know what they are talking about when they go out on the road.

SPECIALTY COMPANIES:

1. In New York, yes.
2. Salesmen are always on probation.
3. Upon hiring a man for a selling position, he is first placed as salesman with one of our sales agents and upon the record he makes in this position depends whether or not he is retained permanently.
4. We seldom employ untried salesmen.

INSURANCE COMPANIES:

1. In the handling of life and accident salesmen we insist upon a trial period. The need for technical knowledge of the liability and compensation business makes it necessary to assign new men direct to our training school.
2. No.

SERVICE COMPANIES:

1. Our system makes it imperative for a man to make good in order to secure a permanent position.
2. As we do not guarantee a man a position for any specified time, all of them are on trial when they come to us.
3. No.

PRINTERS AND PUBLISHERS:

1. As all selling is done from one office, all salesmen are virtually on trial all the time.
2. No.
3. Salesmen are employed with the understanding that their positions will not be permanent unless they reach our standard within a reasonable period.

RETAIL STORES:

1. Not exactly.

WHAT PERCENTAGE OF YOUR MEN RESIGN OR ARE DISMISSED DURING THEIR FIRST YEAR OF SERVICE?

MANUFACTURERS:

1. Am unable to answer this question for the reason that our period of training covers about fifteen to eighteen months. As a partial answer thereto, would say that about 80 per cent. of the men we train remain with us from a period of two to four years.
2. After really hired, about 5 per cent.
3. We do not make changes in our sales force very frequently. Of the twenty-five men we now have, perhaps all of them average more than five years in our employ. During the last few years no man has resigned or was dismissed during his first year of service.
4. Very few. Do not remember of over three or four cases in the last ten years.
7. About one in twenty.
8. Less than one per cent.
9. No record kept.
10. About three out of ten.
11 We do not have the record.
12. We do not keep this kind of a record.
13. About 20 per cent.
15. Do not recall one.

SPECIALTY COMPANIES:

2. Very small. Cannot give true figures because dealers employ their own men.
3. About 20 per cent.

INSURANCE COMPANIES:

1. Less than 10 per cent.
2. About 50 per cent. leave for all reasons.

SERVICE COMPANIES:

1. A very small percentage.
2. This is difficult to answer as the financial situation has a great deal to do with this. Some years we lose a large percentage; other years very few.
3. A very small percentage.

Printers and Publishers:

1. Our changes are so seldom that we have not sufficient data to answer this question.
2. One-half.
3. This varies. For a number of years only two men have left during the first year of service.

WHAT HAVE YOU DONE TO DECREASE THIS PERCENTAGE OF LOSS?

Manufacturers:

1. We are constantly aiming to improve our method of selection and education of the men after selecting, in order to reduce the percentage of loss, and we believe that this record of 80 per cent. is an evidence that we have accomplished some good work along these lines.
2. Education and careful supervision.
4. The percentage is so small in our organization that we have not had occasion to develop any particular plan to make any special effort to decrease this percentage of loss.
7. Nothing, except to be more sure that the man selected is really good.
8. We use care in the selection of the men we employ.
9. Our candidates are very carefully selected.
10. We exert greater care in selection and give more attention to training.
11. The loss is very small and we have done nothing to decrease the percentage.
13. More care in picking men and the selection of a bigger percentage from our inside forces as well as more intensive work on the men themselves by means of sales schools, letters and personal help.

Specialty Companies:

2. Educate the men; discriminate in material.
3. Improve our methods of educating and training new men.

Insurance Companies:

1. Our experience is so favorable that we have not thought it necessary to give special attention to first year losses,

since most of them are due to recognition on the part of both the salesmen and the company that they are totally unfitted for our work.

2. The most practical, and probably the most effective thing done was to institute a contract providing a scale of increasing compensation covering the first fifteen months of service.

SERVICE COMPANIES:

1. Personal work with the men to keep up their interest; give them better sales education, and make their earning capacity greater.
2. Where the percentage of loss of men is large, the only way to keep them is to treat them right and give them more money. Sometimes one and sometimes both.
3. Trained our employes to a better understanding of their positions and their possibilities for advancement.

RAILROAD COMPANIES:

1. We have endeavored to increase the loyalty of all our employes and train them into efficient service.

PRINTERS AND PUBLISHERS:

2. More careful selection of higher grade and higher priced men.

WHAT BASIS OF REMUNERATION HAVE YOU FOUND MOST SATISFACTORY BOTH TO THE SALESMAN AND TO THE COMPANY?

MANUFACTURERS:

1. Salary.
2. Salary and commission.
3. Straight commissions with drawing accounts.
4. Salary.
5. Salary.
7. Base salary and commission on sales above a certain quota.
8. Straight salary.
10. Salary.
11. Salary.

13. Salary.
14. Salary.
15. Salary and stock bonus.

SPECIALTY COMPANIES:

1. Straight commission.
2. It depends upon the place and organization. General tendency at present is towards salary and commission.
3. Commission basis for sales agents and salary basis for new men.
4. Salary and commission, or salary and bonus are found to be the most satisfactory and equitable method of payment.

INSURANCE COMPANIES:

1. In our supervising sales force system supervision gives little option. Salaries are undoubtedly the best. With our producers—the men on the firing line—straight commission. We occasionally start producers with a combination agreement of salary and commission, but eventually they become self-supporting and may be placed on a straight commission contract.
2. Salary and commission.

SERVICE COMPANIES:

1. Salary and commission.
2. Salary plus commission.
3. Salary.

PRINTERS AND PUBLISHERS:

1. A drawing account figured against commission on sales.
2. Straight commission.
3. Salary.

RETAIL STORES:

1. Salary.

THE CHAIRMAN: Before entering upon the discussion of this report our Executive Secretary, Mr. Henderschott, would like to make an announcement.

MR. HENDERSCHOTT: Your President, Dr. Steinmetz, has appointed the following committee to nominate officers for 1916, that is not the officers that will be elected this year, but next year.

NOMINATING COMMITTEE

Mr. J. L. Conover, Jr., Public Service Corporation of New Jersey.

Mr. N. F. Dougherty, Pennsylvania Railroad Company, Pittsburgh, Pennsylvania.

Mr. H. W. Dunbar, Norton Grinding Company, Worcester, Massachusetts.

Mr. A. W. Soderberg, Carnegie Steel Company, Munhall, Pennsylvania.

Mr. L. W. George, Commonwealth Steel Company, St. Louis, Missouri.

I am requested to call your attention to the subject of the educational exhibits in the balcony of this hall. There is some question whether or not this exhibit should be continued. It has been adopted from the beginning and it has been attended by a considerable cost and only a few people have been noticed in the balcony examining the exhibits. Possibly this is because many of us have looked over the exhibits at the two previous conventions. It is noticeable that those who have been examining the exhibits are those who have been absent from previous conventions. The Executive Committee would like the opinion of any member or any guest as to the value of these exhibits.

The Chairman: I will call on Mr. N. F. Dougherty, of the Pennsylvania Railroad Company.

Mr. N. F. Dougherty (Pennsylvania Railroad Company): Mr. Chairman, ladies and gentlemen, while my name appears in the section of this report dealing with skilled and unskilled labor, I want to say that I gave Mr. Johnson practically no help on it. It is a good report and the credit should go to him.

This Association was organized primarily to provide a clearing house for the exchange of ideas and practices in the training of employes in actual work. We should, however, exercise care in the selection of the new man, or we will have to do just that much more training.

This report shows that corporations have some general system, but it is largely a system depending upon the judgment of the individual rather than an exact science.

Employment is more important than training after employment. It has been stated at both of our previous conventions that there is a gap between the school and employment. If you properly safeguard the boy at the adolescent period, you will do much to eliminate the adult floater.

We should seriously consider standardizing employment plans among the large industries. We should gradually build up specified requirements that applicants should meet. This would serve notice on parents and educators that a child's education could not be neglected. The corporations should, however, co-operate with the parents and schools in such a movement.

The Pennsylvania Railroad made a study of this question some years ago, and I will read you the paragraph of this report which analyzes the various classes of labor. This paragraph is not only instructive from the standpoint of this analysis, but demonstrates very clearly that we have a big problem in the semi-skilled workman, the workman who cannot be classed as a common laborer, nor as a skilled mechanic.

The classification "skilled labor" is broad, and if applied to all divisions of labor possessing qualifications beyond those of the ordinary unskilled man will include many workmen, who, while qualified to render satisfactory service in certain special lines, are not actually skilled mechanics in the proper sense of the word. Many of these men are foreigners possessing little or no education, and it is extremely doubtful whether men of this type could successfully pass an examination of even the simplest kind. In certain districts, at least, this element must be relied upon to a large extent in recruiting men for positions, which, while not requiring journeymen mechanics, demand at least a knowledge and skill considerably beyond that possessed by the unskilled man. This condition would seem to render impracticable at this time an educational test which could be generally applied to skilled workmen.

With respect, however, to men who seek employment as qualified mechanics in any one of the several trades including that of machinist, blacksmith, boiler-maker, carpenter, car builder, etc., it is our opinion that an educational standard equivalent to that required of prospective firemen and brakemen should be insisted upon. We are further of the opinion that in view of the marked tendency on the part of the public school boards today to provide facilities for practically training in the mechanical arts, boys and young men who are so situated as to be unable to take advantage of the regular courses of study, the younger generation of men employed in positions between that of mechanic and unskilled laborer should have acquired some education, and that in filling such positions, employing officers should endeavor to obtain men who can successfully pass the educational test proposed for the mechanic and trained service employe.

Boys employed as messengers, junior clerks, apprentices, etc., should possess at least a good common school education in order that they may be capable of development for positions of some authority. For clerical positions of more advanced grades, further tests to determine the candidate's qualifications for the particular work involved should also be required. Men employed as operators or in positions from which they will eventually graduate as operators, should be given an examination at least as severe as that recommended for brakemen and firemen; operators, of course, to be qualified as telegraphers, or in the use of the telephone and to be familiar with the Book of Rules and Time-table as may be required.

Now that is what we are trying to accomplish today in the Pennsylvania Railroad and that is the test which we require in the employment of the service. (Applause.)

THE CHAIRMAN: Mr. P. J. Reilly of the Dennison Manufacturing Company will be the next gentleman to discuss this paper.

MR. P. J. REILLY (Dennison Manufacturing Company): Mr. Chairman, ladies and gentlemen, my remarks will have to do with the "turn-over" of the labor force in industry. I was somewhat disappointed to hear from the chairman of the Employment Plans Committee, that of all the questionaires sent out asking for information on labor turn-over, only three replied, so that we did not get any information from this source that will be of interest. I think that Mr. E. M. Hopkins is in a position, however, to know what the average turn-over is in industry. He was formerly president of the Employment Managers Association of Boston, and as such had unusual opportunities to hear from the members of the Association just what their labor turn-over was. He stated yesterday that he thought the average for many industries would be nearly 100 per cent. of the average force on every payroll during the course of the year. That figure does not seem at all large, but is if anything rather a little conservative, based on the figures that I have been able to obtain.

I think that the method of handling employment routine, has a very decided influence on the turn-over of labor employed; and I am going to indicate briefly the method our company employs in handling labor. I hope that later on when the discussion is open from the floor, questions will be asked that will give further light on this subject.

First, a word as to our physical working conditions:

We are a manufacturing industry in a town of about 15,000 population, a town which in normal times is considered to be a "labor shy" community. We employ about 2,500 hands normally; 55 per cent. of whom are males, and 45 per cent. of whom are females. Ten per cent. of our force is skilled and includes such workmen as pressmen, compositors, carpenters, machinists, and a few other trades requiring at least a four years' apprenticeship. Ninety per cent. of our labor is unskilled, and this unskilled help is used in about ninety different occupations, many of which are peculiar to our industry.

We make shipping tags, paper boxes, Christmas tags, crepe paper and a very large variety of paper specialties unique with us, and in many cases not duplicated by any other manufacturer.

We have effectively reduced our labor turn-over because we give very careful attention to four steps in the employment of our help which are as follows:

A: We carefully study the requirements of each job;

B: We analyze the information furnished by each applicant;

C: We keep a record of the *tangible* values of each employe;

D: We profit as much as we can by carefully weighing the reasons given by employes for leaving our service.

In my opinion the first of these four subjects has the most influence on labor turn-over, since on the study of the requirements of each job, will hinge the degree of success obtained by an employment manager in the selection and placement of employes.

Our study of each job's requirements enables us to record all details of a position before we seek a person to fill it. We know from this study the duties of the job; the time required to learn them; the wage range; the posture of the person doing the work; the age and physique which experience has proved to be best in an employe, and anything else which will aid us in making a good selection.

To show how this information is applied to certain jobs, I will cite two or three examples:

For fine paper box making we employ nearly 400 girls. We have found that a girl who would succeed quickly in this branch of our business, should have small, well-kept hands,—hands not roughened by heavy house work; she should be right-handed, since the left-handed girl increases unduely our training expenses. She should be from fifteen to twenty-five years of age; she should have good vision, and she is preferred when she has had at least ninth grade of schooling or better.

We have a training school for the teaching of paper box making and we find it costs us about $35 to put a girl through the course of instruction occupying fourteen weeks. Whenever we select persons who deviate from the above set of requirements, our cost is considerably increased, or at least the results are not so good because the girl will drop out of the box making school in a few weeks' time because she does not progress, or she is considerably longer in learning this trade than a girl who measures up to our ideal requirements.

Again, to take another occupation, that of gummed label cutting:

Gummed labels are still cut in rather an old-fashioned way. The labels are printed on large sheets, and put on a woden block which is similar to a butcher's block. They are usually cut twenty-five, thirty-four, or fifty at a time, depending on the size and shape of the label.

The job requires that a person stand all day, and it is quite obvious that a girl, to be contented at this job, ought to be free from such defects as broken arches, rheumatism or a weak back. On this job we found that the girl who was at least five feet three inches in height, worked with the least fatigue. If she was much taller than that, we found that the stooping over the block brought on needless fatigue and usually resulted in her wanting to get away from the job and into another occupation. On the other hand, if she was much shorter than that, she had to hold her arms in an unnatural position that was also quite tiresome. A girl to do this work successfully also requires a fair knowledge of arithmetic. She must know enough arithmetic to remember that when cutting a thousand labels in "lifts" of thirty-four, that she would get one hundred and two labels every time three cuts were made, which would be the amount required to fill the box. We usually put one hundred and two labels in a box supposed to contain one hundred labels, when thirty-four labels are cut at a time. If she made only two cuts and put those in the box, and the box of labels was shipped out, we would get a complaint from our customers that the boxes were short count. On the other hand if she made four or five cuts and put them all in one box, we would have considerable loss, since the boxes would be considerably over count. It seems almost incredible that any average employe would not have sufficient arithmetic to do a problem of that sort, but in our community a fairly large proportion of our help have had only sixth, seventh, or eighth grade schooling, and after they have worked for a period of years in other factories at occupations not involving the rudiments of arithmetic, they may be unable to do problems like this.

Again, take the job of order fillers in the finished stock department as another instance:

This job requires a very active man. He must walk much and should be able to move about quickly. He must, therefore, be free from foot troubles; rangy and active enough to climb to high bins quickly so as to get at stuff. Also he should be intelligent enough to read orders swiftly and accurately.

So, in this manner we are attempting in our business to make a little study of every occupation and record the essential requirements. Not that we are going to get the idea that the requirements are such that it requires about ninety different types of persons to fill ninety different jobs, since it does not, as human talent is very versatile; but when the employment manager knows the general requirements of each job, he has a clearer idea of the sort of person he ought to select. This study does another thing which is almost as important—it gives the employment manager a story which he can present to the applicant for employment which will outline the probable progress of that applicant on the prospective job if he accepts it.

Therefore, before we make any move at all to supply anybody from the labor department when additional help is needed, we get firmly fixed in our minds from this study, what sort of person is required on any particular job. We then analyze the information furnished by an available applicant. We do not attempt to have every minute thing covering an applicant on the application blank, but we do make our selection on the answers to about eight questions that have been carefully prepared.

In interviewing an applicant, we note his physique and ascertain his age, the amount of schooling and working experience he has had. This information will indicate if an applicant is competent to fill a job. If we are satisfied that he can do the work, we then try to weigh the chances of his remaining at the job and this we determine by considering the answers to another group of questions. These reveal (a) the reason the applicant is in the labor market; (b) the wages he formerly earned; (c) his condition in life and the number dependent upon his earnings; and (d) how long he has lived at his present address.

In a small town community, if a man is hired who has a family in the city, and if he merely drifted into this community at a time when things were not very brisk in his home town, our statistics show that he is not likely to remain very long. Naturally we do not want ordinarily to put the time and patience into training these fellows in our business if they are going to leave us in a short time or just as soon as business picks up in their home town.

However, once the employe is accepted and put to work we keep a record of him, and we attempt to be careful to keep a record of the tangible things only which may be recorded about his work. We usually find the record divided into these four headings: The employe's productivity, his errors, his attendance, and his habits.

His habits we do not greatly concern ourselves with, unless they become too obnoxious. For instance, if a man is very irregular and is continually having attachments put on his wages and thus causing us a lot of trouble, that condition will prompt us after a while to take him to task and when the chance occurs, we might let him go.

If an employe's work is satisfactory as shown by his record, we will advance him—if it is not, we will attempt to transfer him to a job in another department that fits him, and of course there must be some justification for that.

When a man first takes employment work he may be anxious to make a record for holding employes, and may transfer unsatisfactory employes on almost any pretext at all, but a little experience will teach him when it is wise to dismiss a man entirely and when it is wise to hold him and make a change in his work, if it is desirable for some reason to have him transferred.

During each year in our factory we make about two hundred transfers of employes from one department to another. During the past six months these transfers were made for the following reasons:

Advancing employes from lower positions to higher positions	51%
Employes who asked for other positions	4%
No work in the department in which the employe was first placed	32%
Not adapted to first job	8%
Miscellaneous reasons	5%

A study of the reasons given by employes for leaving jobs is very illuminating, particularly those reasons which reflect a condition that is under the employer's control. We pay much attention to the case of any employe who leaves because of dissatisfaction with the pay, with the work, or with his treatment by a department head. If that cause occurs and re-occurs in the same department the condition is studied there, and remedial suggestions made to the management which are usually taken up at once by them.

To summarize briefly then: I think that the correct start for rational selection and placement work is for the employment manager to get as much information as he can covering every job in his place; to get his information from prospective employes from the answers to six or eight vital questions; in placing and following up the new employes to see that they are advanced just as soon as their work deserves it, and to see that those who are not progressing are either dismissed or transferred, and this to be done quickly, that is within two or three months and not six months or a year after an employe was engaged.

Finally an analysis of the causes of employes leaving should be made which will be very profitable to an employment manager.

Just a word about the number of employes who left our employ. In 1914 we had one leave for every five employes on our pay roll. And in 1915, so far this year, we had only one leave for every thirteen employes on our pay roll. I thank you. (Applause).

THE CHAIRMAN: I have been somewhat generous to the last speaker, because I felt that the facts which he had to give you were so interesting that we might well afford to give him the time.

Since Mr. Weller of the Packard Motor Car Company is not present I understand that Mr. Dumbleton of that company will take his place. Mr. Dumbleton will now discuss this report.

MR. H. F. DUMBLETON (Packard Motor Car Company): Mr. Chairman, ladies and gentlemen, I am sure that you are sorry, as I am, that Mr. Weller is unable to be here, because I am quite sure that he has impressed you at the last two conventions with the importance of his work. I will try to show you what his convictions are with respect to the result of skilled and unskilled labor.

The Wisconsin State Board of Education is responsible for the statement that over fifty per cent. of the men in this country have not had the advantage of more than a sixth grade education. One has to spend but a single morning at the employment window of any of our large factories to convince himself of the truth of this assertion, for the vast majority of the men interviewed show by their appearance their unfitness for any responsible job. It is because there are so many unskilled and such a woeful lack of skilled men that our managers and supervisors of labor have been forced to train the unskilled.

There are, of course, certain lines of work, such as tool making, die sinking and draughting, that are solely the field of the skilled, and in which the unskilled man would not be able to succeed. It is also true that there are many jobs that can be done as ably by the unskilled as by the man with a better training. But in this day of specialization, there are certain kinds of work that can be done as well by either the man with a trade or without one. It is the relative merits of the men of both classes, on this sort of work, that is engaging the attention of our factory managers.

In this discussion, let us call the man who has served his apprenticeship and learned the tricks of his trade a skilled man, and he who has never learned a trade, but has drifted here and there, from one job to another, an unskilled workman.

When an unskilled man first enters a factory, it is not reasonable to expect him to be able to compete with a man who already knows how to do the work that is being taught the unskilled workman. He demands a great deal of attention from the foreman, therefore, because he is on strange ground, and unlike the skilled man, he is wholly lacking in any idea of how to meet and solve the little problems that necessarily arise. For in many cases he does not know the difference between a drill press and a milling machine, and for this reason, he is afraid to trust himself at all, and so depends upon the foreman to do his thinking. It is, therefore, obvious that he is from the outset a distinct handicap to his foreman and the department. There is, however, one fact that is greatly in his favor. He realizes that he has no trade, and is at the mercy of others. And for this reason, he is usually a hard worker, fighting with the spirit of one who knows that he is being given his last chance to make a success, and a living wage for himself and his family. And so we find him ready to do almost anything to gain the good will of his foreman. The attitude of the skilled man when placed beside the unskilled man is almost the opposite. He considers himself superior to the other man, and is inclined to regard his work with a feeling of contempt and realizing his superiority, he is likely to "soldier" on the job. Thus we see that while the unskilled man is handicapped in one way, he has a most valuable asset in his attitude towards his work.

We would naturally expect the tradesman at first to outstrip the other in his production. Not only is he able to produce more work, but his percentage of scrap is very much less. It is necessary to keep a constant lookout to see that the new man does not spoil work, for he fails to sense trouble as quickly as the experienced man, and many a time he might save his work when things are not going right if his perception were a little keener. For this reason, it is necessary to exercise great care in the design of jigs and fixtures that are to be used by him. In other words, they must be as nearly "fool proof" as possible. But even with the best of fixtures his work is unsatisfactory when compared with that of the experienced man.

As the unskilled workman becomes more familiar with his work and his new surroundings, we note a great change. His determination has made him a better producer, and his conscientiousness has helped to reduce his scrap. It is very probable that if the two men are now working at a day's wage, the unskilled man will produce as much as the skilled man, because he is anxious to "make good," while the other man is more inclined to hold back his production. If, however, we let them work under a piece rate or premium system we will see the advantage of the training of the experienced man, for he will devise little shortcuts that would not occur to the other man, but which will make him the faster producer. Again, when the two are working under some such stimulus, the unskilled man is much more likely to make a larger percentage of scrap.

Even after the unskilled man has become skilled in the performance of certain jobs, he is not as valuable an asset to his employer as is the other workman. He seldom produces as good a grade of work nor is it as safe to depend upon him for production. When it is necessary to change the two men to different jobs, we note another advantage that the experienced man has over the one with less training. He has no particular trouble to adjust himself to the new conditions. The unskilled man on the contrary is certain to experience more or less trouble when given a new job, and again he is dependent to a considerable extent upon his foreman.

Despite the many disadvantages of employing unskilled men, it is absolutely necessary to hire a certain percentage, because of the scarcity of satisfactory experienced men. We must, therefore, adopt some far reaching policy for making the unskilled fit for our services in the factory. The Packard Motor Car Company is solving this problem in a most satisfactory manner. This company has trained a great many unskilled and has made them workmen who are as satisfactory as it is possible for a man, who is not a machinist by trade, to become.

We have in many of our twenty-five machine departments a man who is competent to train the "green" men placed under his instruction. All of these instructors are experienced machinists, many of whom have proven their worth in our own factory and so we know that they are well fitted to teach the new men the methods of manufacture that are used in our plant. The man who has charge of these instructors, and who is directly responsible for the training given the new men and the grade of work they produce was formally one of our ablest foremen.

Each instructor is given not more than ten or twelve men to train to operate a particular machine. Great care is taken in the selection of the men who are to become machine operators, for it is essential that they are the sort of men that will fit into our organization. A thoughtful analysis of the type of man best suited for our purpose has been made, and we find that the young inexperienced married man makes the steadiest worker. The pressures at home makes it necessary for him to earn as much as possible and so he proves himself a hard and consistent workman.

When the supervisor of labor sends these men into the factory, he assigns them to study the work produced on one type of machine. We now have men learning to operate drill presses, milling machines, lathes, Jones and Lampsons, boring mills, gear cutters and grinders. The men are not to learn how to do one or two jobs on their particular machine, but should at the end of a two months' trial period be able to handle with a little aid from the foreman almost any job that is given them. In other words, we are taking unskilled men and making them skilled in the operation of a particular machine. At first the men are given only such jobs as do not require extreme accuracy of workmanship, and are entrusted with more exacting work as they prove their aptitude. For the first two months they are not held accountable for the amount of their production, but are held strictly for the scrap that they make. We have found that these men become fairly good producers and so after a few weeks when they are able to keep their work above standard time we allow them to work on a premium basis. At the end of a trial period of two months a report is made for the Employment Department and if a man has proven himself satisfactory, this rate is raised and he is taken charge of by the foreman. He is now on the same standing as the other men in his department and, as he proves his value to the company, his rate is further raised.

This plan is giving splendid results and we are able to train men to operate one kind of a machine quite satisfactorily. But we are still convinced that the skilled man is the more valuable to the company and so we hire as many skilled men as we can, and train the unskilled only because we are forced to do so.

THE CHAIRMAN: Mr. W. M. Skiff of the National Lamp Works will now address you.

MR. W. M. SKIFF (National Lamp Works of the General Electric Company): Mr. Chairman, ladies and gentlemen, in discussing that portion of the report of your Committee on Employment Plans dealing with the employment of office and technical help, I wish to express our regret that the figures here shown could not have been compiled from the statistics from many more representative business institutions.

Of the 49 questionaires returned nearly 25% were useless since none of the questions were answered due doubtless to the fact that the business institutions addressed either possessed no definite scheme of employment covering this particular class of labor or else considered that the disclosing of any plan which they operated was contrary to company policy. It is gratifying to note that from the useful questionaires received by your committee there was ample proof that a very large percentage of those replying to our questions had exercised considerable care and thought. This showed not only the spirit of co-operation existing within our organization but signified the importance which our members place on this phase of the work.

In arranging our questions an attempt was made to so group them that they would follow somewhat in the order of a regular employment interview. For example after the gathering of certain personal statistics the questions are intended by their answers to assist the employer in determining something of the applicant's past history, present status, and future desires or ambitions.

For the purpose of analyzing the report, as here printed, I have rearranged the figures obtained so as to show the relative importance in which the various questions were viewed by those answering them.

Questions arranged in order of rating of per cent. affirmative.

Rating in order of % affirmative		No. of questions	% Affirmative
1.	Previous employment, General	89	100
2.	Age	80	97
2-a.	Names of employes	89-a.	97
3.	Duration of employment	89-c.	94
3-a.	Nature of Work	89-d.	94
4.	Married or Single	79	92
4-a.	Reason for Leaving	89-g.	92
4-b.	References	89-h.	92
5.	Scholastic Education, General	88	89
6.	Drinking	93-a.	87
7.	Do you look up references?	89-i.	84
7-a.	Health, General	92	84
7-b.	Present Health (	92-b.	84
7-c.	Qualification for clearly defined position	97	84
8.	Mental attitude towards advancement	96	82
9.	Remuneration during previous employment	89-f.	79
10.	Past Health	92-a.	76
11.	Define desires	94-a.	71
12.	Natural aptitude as indicated by preference to various subjects studied	88-b.	66
13.	Scholastic Standing	88-a.	60
13-a.	Habits, General	93	60
13-b.	Definite plans for progression	94-b	60
14.	Weight	81	58
14-a.	Ideas as to the Relative Importance of money in comparison with other things	95	58
15.	Height	82	55
15-a.	Home Environment	86	55
15-b.	Parental supervision	87	55
16.	Ultimate Aims, General	94	53
17.	Physical Examinations	92-d.	45
17-a.	Smoking	93-b.	45
18.	How obtained (previous employment)	89-b.	39
19.	Line of descent	85	37

19-a.	Working hours (previous)	89-e.	37
19-b.	Financial Obligations, General	90	37
19-c.	Reasons for debt, if any	90-a.	37
20.	Church	91-a.	32
20-a.	Societies	91-c.	32
21.	Plans for meeting financial obligations	90-b.	29
21-a.	Social Standing, General	91	29
22.	Clubs	91-b.	24
23.	Texture	84	21
23-a.	Progress made in Society	91-d.	21
23-b.	Athletic diversions	92-c.	21
24.	Complexion, General	83	18
25.	Color of eyes	83-a.	8

Upon analyzing the above, it is interesting to note that a comparatively small percentage of employers seem to feel it desirable to inquire into the applicant's financial obligations and social standing. Possibly this small percentage is accounted for from the fact that the information sought might be obtained and considered in connection with the organizations' plans of promotion and welfare work.

From the figures shown, one can see that a small percentage of employers consider it necessary to record the applicant's complexion and color of eyes. Probably in the large majority of cases where this information is desired it is used as a means of identification only.

The replies received indicate that employers generally believe it to be highly desirable to have information as to the applicant's previous employment, state of health and use of intoxicants, together with information relative to the applicant's education, and whether he is married or single.

Many other interesting observations may be obtained and it is hoped that a careful scrutiny of the above figures will assist any employer who is organizing an employment plan for office and technical help. (Applause.)

THE CHAIRMAN: The next gentleman to discuss this paper is Mr. A. A. Server, Fort Wayne Electric Works, but since he does not seem to be present the discussion is now open to the floor.

Mr. F. H. Fuller (Goodyear Tire & Rubber Company): It seems to me that the employment office has not been given enough consideration. In the first place, the employment man should be able to put the applicant entirely at his ease, in fact, make a friend of him during the interview. He should carry that friendship entirely through his affiliations with the company, and I think if Mr. Employer would give serious consideration to the man who is applying for the job, that we would get better results from him.

There is another thing that I would like to bring out that our concern does. We give the department foremen a statistical report of just what they are doing in labor. Each month we send a departmental report to each division foreman, showing him how he stands as to labor. That is, how many we have hired for his department, how many are discharged from his department, the reasons why they are discharged, and the length of service that those leaving the company have put in with the concern. I think that the foreman should know these figures as well as the dollars and cents figures as shown in the budget system which some concerns use.

Mr. Howlett: It has been my practice in selecting men, to work just along the opposite line, and to try to have the applicant not at ease. In fact, I have tried with considerable effort to embarrass him as much as I could to see how he would act under embarrassment. That is the kind of man we want in selling work, especially in machinery. In spite of his profound knowledge of engineering and electrical machinery we know that some of the men he will be called upon to visit to solicit business from will ask him questions that we know he will not be able to answer, and because of his lack of knowledge he will be bound to be embarrassed. We want to find out what he is going to do when embarrassed in this way.

Mr. L. Atherton (Swift & Company): I want to ask Mr. Fuller of the Goodyear Company a question in regard to this report which he sends around to these different foremen. Do the foremen get a report of all the departments?

Mr. F. H. Fuller: No, each foreman gets a report of his own department only so that he may know what percentage of the total hired and dismissed are in his department.

Mr. Atherton: If you find a certain foreman is losing too many men, is there any system of warning him, instructing him or checking him up in any way?

MR. FULLER: We have two ways of getting results from the foremen. First, the reports are sent to the Production Superintendent. He notes them and sends them to the Division Foremen, who, as a general rule, write a letter and attach it to the Labor Report demanding why the labor turn-over is so high. Then the foremen make a very thorough check and report to the Division Foremen giving the reason which, in their estimation, causes so many men to leave their departments. We have found that the foremen use all reasonable effort to keep their help on the job and satisfied.

Second—the Labor Department has a competent man that checks all new men and sees that they are placed on the job for which they were hired. If employes are dissatisfied and can be placed elsewhere to better advantage a change is made, with good results, as a general rule.

THE CHAIRMAN: Any one else care to discuss this?

MR. W. H. EYLER (The Goodyear Tire and Rubber Company): I have only a word to say. The ideas expressed by Mr. Fuller and Mr. Howlett are not necessarily opposed. The type of men and the purpose for which they are hired is different in the two instances. The purpose in the factory employment office is to get men who can be trained to their job and who will stay with the company. It seems to me that in operating his department and handling his men a foreman overlooks an opportunity for making a new man loyal and willing to stay with the company if he gives no encouragement and help over rough places.

Factory operatives are a type entirely different from salesmen and hence respond to different treatment.

MR. J. E. BANKS (American Bridge Company): There is a difference between the two sorts of embarrassment you can put a man into. One is personal, where he feels he has not been met in a kindly sort of way, and the other is mental. I do not think any one has any business to do the hiring of men unless he has some of the human heart in him which would enable him to feel kindly towards others and which would permit others to feel at ease.

MR. HOWLETT: I did not embarrass them personally. I simply asked them a question to which I knew they could not answer and that consequently embarrassed them. That is what has been done very successfully with several hundred men. I have made it a point to pick the men that do not allow themselves to be embarrassed.

As an instance of this—a young man came in from a ten cent store. He said he had been selling goods in that store. We ordinarily require graduates of technical schools and they are not considered applicants until they have had one year's training in our factory in the testing department. However, this young man came to me and stated that he wanted a job as salesman. I asked him where he was working and what he knew about machinery. I stated that in this one case we would waive our requirements and hire him if he could let me have a letter from one of our department or office managers saying that they would have a place for him after he had a course of training. He did not think it fair and wanted to know where he could go to get such a letter. You will be surprised to know that he soon got that letter and we gave him the training along with the college graduates. He did not understand half that he was being told but it did not seem to make any difference. We sent him to the Philadelphia office where he made a good record, in fact above the average. He was made of the right stuff and his ability to overcome obstacles proved it.

Mr. H. H. Williams (Geo. E. Keith Company): I would like to ask a question, and that is in regard to the estimating of temperament in selecting employes. Do you make any such observations with the definite purpose in mind of favoring personalities? I have heard from some men, who I think probably are sales managers, that they do. I think naturally in selecting a salesman managers probably do consider very largely the temperament of the man, and estimate very highly the power of a personality.

A great many purchasing agents that I have observed, seem to be very serious and have the appearance of being on the defensive. I wonder what some of the employment managers here think about that, and if in selecting a purchasing agent, they would look for a man who had a serious countenance and a serious temperament. I will illustrate my question: If twelve men come into your office, supposing that you were a manufacturer of shoes or the purchasing agent representing that concern, and the very first man got a good reception and made a sale to you, but the last eleven were told that you were absolutely not interested and consequently were not decently received, I wonder if you would like to have that kind of a man at the purchasing agent's desk, or would you rather have the man who had just as much skill as a salesman and who had the power to make friends for your shoes? For instance: Before the man who was trying to sell your concern goods would go out, he would have been made a friend of your shoes and your concern by the treatment received. I wonder what the attitude is on the part of the employment managers on this question?

Mr. Howlett: I select men with pleasant personalities as purchasing agents. That is not the custom, though.

The Chairman: Any one else who has an answer to the question?

Mr. H. J. Tily (Strawbridge & Clothier): At the risk of being called to task for stating what is obvious to everybody, I wish to say that the answer to most employment problems lies with the employment manager. He needs training more than almost any other person in the establishment who is not handling technical problems. The entrance to any institution should be a proper entrance. If we all could afford to have such a genius as Mr. Howlett, there would be no necessity for this meeting. I had a very uncomfortable feeling when I first came in contact with him. It was on the platform last year at the convention in Philadelphia. I felt that one glance out of those bright eyes had sized me up because of the first words he said to me: "You don't have to read it all unless you want to." (Laughter.) It didn't embarrass me, I stuck to the job and read it all, but I read it much faster than I felt it advisable to have done, because I was fearful of interruption by the Chairman.

We need to study, (those of us who are actually doing the employing, who are actually seeing and selecting men,) we need to study the human units whom we think best adapted to our business. But we want a kind man doing it, we want a man with a heart, a man with initiative, in brief, just such a man as Mr. Howlett! A man who can embarrass when it is necessary to embarrass, and one who can put the applicant for a position on his mettle to see whether he has the qualifications which we need.

Those of you who employ engineers must have different qualifications than those who employ salespeople. You must have engineering experience, must have engineering training, but all employment managers must be able to analyze men and select as quickly as possible those who appear to have the qualities that are necessary. This point in many establishments has been given a great deal of consideration. I recall that in our own establishment we have had, fortunately, but four men in the last thirty years who have been at the head of the employment bureau. I shall not soon forget how I was received when I came to seek employment as a young man in the institution with which I am still identified. Though many years have passed, the employment manager's personality is still as fresh in my mind as if it had happened yesterday. He was a man of education, of refinement and dignity, and treated me, a young man, courteously, as though I was a customer and not simply an applicant for a position. Now that is the initial interest which an applicant for a position should be made to feel. It is a *first* impression of you. It is the impression on which you are going to build, It is just as true, I think, of the college graduate who comes to you as it is of the young girl of fifteen or sixteen years of age who comes before one of our employment managers. There is, of course, a technique to be followed in taking the estimate of a man or woman who is under consideration for employment; there is a way of promptly ascertaining what the applicant's education is, but the employment manager of the right temperament will get from the applicant valuable information which one unfitted by temperament for his position would never be able to get. Elaborate answers to our questionaire will not help one bit in moulding temperament.

Most of us have heard, I think, of a widely advertised book of recent publication which aims to supply employment managers with a scientific basis to make them accurate judges of human nature; it deals with the color of the eyes, complexion, color of the hair, square type, angular type, round type of person, etc. Most of you get this knowledge intuitively. We must all get ability to properly judge human beings if we are to be successful buyers of human labor.

I think this discussion could be made of greater practical value if we could hear of more personal experiences such as those told by Mr. Howlett in connection with his work as an employer of salesmen. In brief, ladies and gentlemen, let us pay more attention in discussing employment problems to the qualifications of the man who is doing the employing.

MR. A. F. BARDWELL (Yale & Towne Manufacturing Company): The talk made by the gentleman that just preceded me reminds me of an experience I had some years ago. I was requested to go to Philadelphia to see a man who was president of a manufacturing company and who was interested, also, in selling carpets. He wanted me to reorganize his manufacturing proposition on the same basis as he sold carpets, namely without any waste. He bought carpet by the yard and sold it by the yard so that there was no scrap. The profits were the difference between the buying price and the selling price, minus the overhead expenses. I think that is a good description of a method of employing in a department store, and is all right, although I do not know anything about a department store. But you cannot, in our experience, hire altogether by appearances. There are, however, a good many things that can be said along that line. At the same time, the proposition is for what position are you hiring? Are you hiring a man to shovel coal, or are you hiring an employment manager? I think that is the vital question to be considered and studied in a great many of our organizations. No doubt, all that has been said in regard to employment here is correct, but let us specialize on the question of employment. Let us determine first the kind of help we require for the vacant position, and then seek for the man who will most nearly meet those requirements.

THE CHAIRMAN: Any further discussion?

MR. C. R. DOOLEY (Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa.): I should think Mr. Howlett's plan would apply to men who had had some business experience but not to the young man just graduating. At home, in the public schools, and all through college he has had little or no real responsibility. Moreover during this time he has lived in an atmosphere of culture and refinement and has been taught by both precept and example that modesty, courtesy, even temper, and a dignified retirement are the essentials of conduct. He has been taught not to fight instead of how to fight. I should think Mr. Howlett's reception would shock and offend his artistic sense.

The newsboy who has gotten his education on the street understands the art of getting what he wants by fighting without seriously offending his adversary. Of course he is lacking in these other things.

All of a sudden the college bred man finds himself in the newsboy environment and it has been our experience that no one rule can apply to all cases. We must devise a proper introduction for each man as he comes to his new work. Some men need an abrupt reception, others need the warmth of friendship to find out what is in them. They all need obstacles to overcome but also the proper proportion of encouragement.

The point I want to make is this: both types of young men fail not because of lack of either character or ability but because of a lack of knowledge of standards by which they will be measured. The first man does not know that the world expects him to be aggressive and persistent. The second man does not know that the world demands culture and refinement. By Mr. Howlett's method these characteristics are easily discovered but the real need is to develop them before discovery means failure. In other words, if the college graduate had had a series of minor experiences in the business world or if his friends and professors had been more exacting and less serving he would have known better how to handle himself. I would venture that the great majority of men rejected by Mr. Howlett will acquire the characteristic which they now lack, very shortly.

This question of standards of conduct is to me the most important phase of industrial education and I want to take just a moment to present it under three divisions:—

First—Place clearly before each employe the standard of work that is required of him each day so that he can see clearly the amount of material that he must turn out, the time allowed, the general conduct expected.

Second—Establish a connecting link from each position in the organization to the next higher position so that each employe may have some idea of the nature of his logical advancement, provided, of course, that he earns it.

Third—Establish a means of measuring periodically the degree of attainment to the standards set. Place this record before the man so that he may profit daily by his experience.

Every man and woman here today—and I take it that we are a typical gathering—rejoices in the spirit of competition which requires us to make good individually each day. The one thing that worries us is our ignorance of the standard of work required and of the degree of our successes as viewed by our employers. Such an open plan of standards and records places every man upon his mettle and makes competition a pleasure. It does not eliminate the fighting spirit but rather glorifies it by placing the battlefield in the clear open sunlight. Prejudices, opinions, and traditions are set aside and merit wins.

I think this is infinitely more important than schedules, methods, subject matter, or even teachers. Our entire educational work is based upon it. Every student, from the lowest apprentice to the highest technical graduate, is judged periodically by different department heads upon a number of standardized characteristics. These records are open to the men at all times and the result has been really wonderful.

DR. HENRY C. METCALF: I think these efforts to establish standards of procedure are excellent. They mean an earnest effort to get at the facts.

I wish for a brief moment to call your attention to what impresses me as a rather extraordinary situation. As I have said, in problems of employment I have been much impressed with the fact that those who are responsible for the selection of employes for industrial establishments have hinted at little or no organization for the purpose of studying the many and complicated problems for which employment managers are responsible. Until very recently I have known of but one association definitely established for the purpose of studying the problems of employment. Such an organization of heads of employment departments has been quietly operating in New England for some years. A similar organization was recently established in New York City. Mr. Hopkins told us yesterday that a third such organization was being established in Philadelphia. I have no doubt these employment managers' associations will develop in the near future in all our leading industrial centers. Almost every other type of activity one can think of has its organization for the exchange of ideas. The exchange of experience among those who are responsible for the selection of help seems to me a very important part of their work.

Another important problem receiving too little attention it seems to me is the idea of searching for versatility in workmen, and striving to find it through rotation and work alternation. Work alternation is one of the helpful experiments in connection with what we are trying to get at this afternoon.

Mr. Reilly in the establishment he is connected with has spoken of "progress on the job." Other speakers have presented the same idea. I wish Mr. Reilly would tell us more fully just what the Dennison Manufacturing Company is doing in the line of informing its employes with reference to future opportunities in connection with promotion. The psychology of the possibilities for promotion nearest to the employe I believe is very important. In my studies of profit-sharing schemes, I long ago came to the conclusion that one reason why so many profit-sharing systems fail is the fact that they do not definitely enough place before the employe the immediate opportunities for promotion and the immediate results from more efficient effort. Profits are usually declared annually or semi-annually. Few people can project themselves into the future over such a period of time. The Taylor system of premium payments is one of the chief elements in the success of scientific management, because the individual workman knows at the end of the day whether or not he has earned the premium. He does not have to wait six months or a year to know whether or not he is making good. Work interest for the majority of people needs pretty constant and immediate stimulus. All efforts, therefore, in the direction of the experiments referred to by Mr. Reilly and others are exceedingly interesting and important as methods of modern vocational psychology, and these exchanges of experience with reference to these more recent efforts are among the most helpful that this Association can offer.

MR. P. J. REILLY (Dennison Manufacturing Company): In answer to Dr. Metcalf's first question, we have not yet completely worked out the scheme of rotating employes from the lower positions to the higher positions so that we can say when they are entering our industry just how long they are going to be on the first job. Even if we could, there is just a little danger as I see it, in their knowing, and the danger is that they will not put their interest and their effort into the position in which they are first placed. We have had experience of that kind with boys. They were told that if they worked well on a certain job their effort would lead to a certain other higher position, and they frequently had their eyes so set upon the other position that they did not put sufficient effort into the first position to make good at it. Thus they could not pay the price of the better job.

In our industry we are cataloging our occupations and the amount of growth permitted in each, so that we may work out a scheme that will result in a true rotation. We think that there is enough versatility and adaptability in human nature to permit a large majority of the average employes to be rotated from one job to another, if the job requires no prolonged training, if it is not of a technical nature or if it is not in one of the trades. I see value, of course, in indicating his probable progress to a new employe as he enters the industry. We try to do that by getting as much information as we can about the wages paid in a particular job and the probable line of progress from that job to another, based on our experience records. I usually speak to new employes of the average earnings which I know can be reached in any definite job. For instance, a young man who comes into our factory to learn printing or to learn the attending of automatic machines is usually told that though the job pays at the start only $12 or $13 a week, he may work up to as high as $20 a week in that particular occupation, but that it would probably take him about three years to reach this amount. This same young man may have qualities which would ultimately fit him for filling the position of sub-foreman, foreman, or department head, but, of course, one does not know at the start that he will do this. We can indicate the line of progress, but we cannot tell two or three years ahead just what the young man's abilities will be.

To put it in a nutshell—we do all we can to select employes from the lower ranks and put them in the more highly paid positions. That has been the policy of the company for years; there is not a department head, there is not a man in any position of prominence in the company who has not been with us from ten to thirty years, and this policy makes all who enter into the industry when young feel that there is always room at the top.

Just a word about the Employment Managers' Association. I am a member of that, and we usually begin in September to have monthly meetings at the Boston City Club one night in the month. The year begins with a dinner which is usually slated at six-thirty, and when the meal approaches its end the discussion on employment problems is then opened. At the present time the organization consists of about sixty-five members. The program followed for the past season has been somewhat of this order:

One month a speaker will be invited to address our Association on labor or employment problems and then his remarks will be open for discussion, following the plan of this convention. On alternate months we have experience meetings, and the problems which come up in employment work are pretty thoroughly discussed, and the experience of each member is passed on to the other. We speak to our brethren there without hesitation because we know one another, and we know pretty nearly all of the problems each has, and we get to know what causes the turn-over in different industries. At one of our meetings we spoke of a uniform application blank; at another, the matter of references was thoroughly discussed. It developed in this meeting that the investigation of references is quite important for department stores, street railway companies and for those who need help in clerical positions. But, generally speaking, it is hardly worth while to investigate a reference given by those who are seeking jobs in manufacturing industries. The reason for the investigation of references in clerical positions, department stores, and street railway companies is because there are many temptations to steal if employes are so inclined, and it is extremely important that the employes in these positions have a clean record for honesty and sobriety. On the other hand, in a manufacturing industry where the operations are largely under rather close supervision and where articles are not of very great value, there is not much danger of loss. We do pay little attention to references because we think that the information we get does not warrant writing very often to previous employers.

The Employment Managers' Association has been formed to better the conditions of the men interested in employment problems and to help them solve their problems by getting together and exchanging experiences, and I think that Dr. Metcalf's proposition is a good one.

THE CHAIRMAN: Is there any one who wishes to ask any questions about the Boston Managers' Association? If not I will call on Mr. Fish.

MR. E. H. FISH (Norton Company): At the Norton Company we have a simple system by which a man gets a job. He applies at the information desk and asks for the head of some department. If he knows what department he wants to get in he is sent to the head of that department, but if he does not have any particular place in mind he is sent to the Educational Department. I do not know the reason for doing that but I suppose the thought is that the Educational Department, being in touch with more of the different departments than any of the others, might be able to place the man, if it is made part of its business to do so.

On one young fellow who came to me recently I tried Mr. Howlett's scheme and succeeded in getting him pretty well embarrassed. He finally said that he really could not work well on a job unless he was very well paid for it. I felt after he had delivered himself of that sentiment that it was about time to terminate the interview and so I let him go back, and I forgot him for a couple of weeks. Later on I came across his application and was considering him favorably until I noticed the memorandum which I had tacked onto it. That brought him back to my mind and when I sent for him and asked him how he could account for the answer he had given me he very frankly said that I had gotten him in such a state of mind he did not know what he was saying and that he could not have told if white was white or black was black.

It occurs to me that the thing I want to know about applicants is this: "Why do you want to work for the Norton Company?" If you put a thing of that kind to your applicants as they come in, about nine out of ten of them will ultimately confess that what they want is a job and they do not care a rap whether it is your concern or my concern or whose concern it is, if they can only get a job. That is the important thing. The tenth man will give you a definite reason.

Mr. Howlett: Mr. Chairman, I want to refer to Mr. Dooley's remark concerning the college man that was not aggressive enough and the college man that was too aggressive. He probably would be interested to know that we always take the aggressive man because we find it is a simple thing to temper the aggressive man, but it is a most difficult thing to instil aggressiveness into a fellow who lacks it.

Mr. Whipple (Westinghouse Electric and Manufacturing Company, Pittsburgh, Pennsylvania): I do not think that man ought to have been "killed," but rather that he should have been given a trial to prove wherein he was wrong. Egotism is often a mere unfortunate symptom of confidence, and is not so harmful if regulated. I do not admire this characteristic any more than you do, but often it is a good sign, especially in the young and inexperienced; it often signifies a good man headed in the wrong direction, or headed for the right goal but pursuing the wrong path, and if you put him on the right track he may prove one of your most useful men.

When a young man applies to me for admission to our Sales School I do not treat him with excessive cordiality; I am not so tenderly human under such circumstances as is our Mr. Dooley. Mr. Dooley has the faculty and desire to put every one at ease who approaches him. My plan is not purposely to disconcert the applicant, but rather to manifest just enough reserve to test his courage and resourcefulness. In determining the fitness of applicants, we have a committee of ten to pass judgment, and never does an applicant escape without interviewing at least six of the committee. Two of the committee were appointed for their intuitional power, and the others because of their experience, all-round judgment, and analytical ability.

In judging applicants we are not unmindful of temperamental aspects. If one has a sensitive and bashful nature, any change of environment is initially embarrassing. I sold goods for many years and did pioneer work for a large portion of the time; I have since been engaged in class-room and lecture work, and yet, whenever I address a new audience under changed environment I am troubled with embarrassment, amounting almost to confusion. We recognize that the man of sensitive nature is often the most forceful and magnetic after his embarrassment wears off through experience and when he gets his bearings.

In analyzing the candidate salesman, as said before, I first test his courage and natural resourcefulness, and then I investigate his employment of his leisure. To my mind, the crucial test of one's taste, progressiveness and ultimate high development is his employment of his leisure. I often put this question to our young men: "What, aside from a good conscience, is the most valuable asset in life?" and not a single one has ever answered it correctly. I then give them the answer: "Your leisure time, if capitalized." If a young man has spent four years at a technical and scientific school, and then from nine to eighteen months in our works, and wants my vote to admission into the Sales School, I must have some assurance of his earnestness and resourcefulness, and if he has loafed during his time of unenforced labor, his appeal to me is not attractive, and I cast my vote against him. Such a man either lacks ambition or common sense, or both. I decide in favor of the man who has a programme and who has executed it.

Now, some of these humanitarians, like Mr. Dooley, visit the various colleges, interview the professors and the students, and seem disposed to let their sympathies control them too completely. The fellows who have had to work their way through college, or who have had to borrow money to defray their expenses while at college, often appeal to them with an over-balanced strength. Such determination and such sacrifice on the part of the student is unquestionably a good sign—a very good indication of final development of character—but, as for myself, my appreciation is for the man who, not having to work as a means of livelihood, does so simply through intellectual pride and knowledge-hunger. There is an acquired mental energy, and there is a natural mental energy, and when it comes to efficiency in salesmanship, I prefer the "live wire" man who does not work because of necessity but because the love of work is a part of his being.

Now, as to the study of "character analysis," many of our people are skeptical as to the value of trying to obtain such knowledge from text books. I do not pose as knowing much about character analysis, but I do endorse Dr. Blackford's methods. She gives fundamentals that are true. The application of fundamentals pertaining to the most complex and exalted study in life is, obviously, very difficult; yet a knowledge of such principles is helpful and greatly aids intuitive perception. If a man is a fool, the knowledge will not greatly increase his confusion, and if he has mental calibre and judgment, the principles as enunciated by Dr. Blackford will help him in the solution of many a problem in the diagnosis of human nature. Guide posts do not describe the views of the route; tell you nothing of the geology, topography, development, and the people of the country to be traversed, but they do point the direction of your goal, and so it is in studying the underlying principles of any science.

If two candidates for admission into our Sales School apply to me, one a blonde and the other a brunette, neither of whom has any marked mental application, I would prefer the blonde because his rate of vibration is higher and this will give him a certain "go" that the more sluggish brunette is not likely to possess.

Now, this may be considered a trivial observation, and even one of doubtful significance, yet I think it is worth while, and its application is more often of value than otherwise. The "practical" man is often prone to ridicule any move that is in the early stages of the scientific. I thank God for the "practical" man; he serves a good purpose and is to be praised for his initiative and courage, but his replacement by the more "scientific" man is in process and will, in time, become universal.

I will say no more on the subject; my purpose was simply to record a difference of opinion with Messrs. Dooley and Howlett. If the time permitted I would take issue with Mr. Bardwell, who does not believe in home study for the apprentice. Unless a man has a job that does not keep him busy, there is no such thing as progress without home study.

COMMITTEE ON SAFETY, HYGIENE AND CO-OPERATION

MR. L. H. BURNETT, *Chairman*
CARNEGIE STEEL COMPANY
Pittsburgh, Pennsylvania

MR. SYDNEY W. ASHE
GENERAL ELECTRIC COMPANY
Pittsfield, Massachusetts

MR. J. C. ROBINSON
THE NEW YORK EDISON COMPANY
Irving Place and 15th Street, New York, N. Y.

THURSDAY—AFTERNOON SESSION

SAFETY, HYGIENE AND CO-OPERATION

THURSDAY AFTERNOON, JUNE 10, 1915

VICE-PRESIDENT JOHN McLEOD, Presiding

THE CHAIRMAN: We will now have the report of the Committee on Safety, Hygiene and Co-operation, which will be given by Mr. Ashe since Mr. L. H. Burnett, chairman, is absent.

MR. SYDNEY W. ASHE (General Electric Company, Pittsfield Works): I am sorry that Mr. Burnett and Mr. Robinson, the other two members of our committee, are not here. Mr. Burnett has had a very wide range of experience in this work in connection with the steel industry. He is full of enthusiasm, and therefore could impart some of it to you. I am also sorry that Mr. Robinson is not here, because as attorney for The New York Edison Company he has come in contact with thousands of accidents which have had to be adjusted, and is thus in a position to deal efficiently with the human side of the problem.

It seems rather interesting, after going through the whole category of sales training, training of apprentices, advertising and office work schools, that when we get to solving our large industrial problems we have to come back to the same idea, namely, that of using educational methods to do what we cannot do with other methods.

We prepared and sent out a questionaire as the other committees did, but our object in doing this was merely to stimulate interest. We also wanted to get any new ideas which were available but in preparing the paper we used largely the experience of the Carnegie Steel Company, The New York Edison Company, the Pittsfield Works of the General Electric Company, and our general knowledge of the subject. We also hoped to make an intelligent digest of the whole subject, and present something concrete which would be useful.

We had a very delicate problem to meet in handling this safety and hygiene work because when this movement was first started in this country a great many companies spent large sums of money, largely in safety devices—one company spent almost two million dollars in one case in safety devices—to eliminate accidents, following largely the experience which had been worked out so successfully by the Germans. The results, however, have not been so satisfactory as had been anticipated. In several places, however, quietly, educational methods have been used extensively as a means of solving this difficult problem of safety, and some very remarkable results have been obtained.

The progress which has been made has shown itself in many ways: in decreased casualty expense, in decrease in lost time, in decreased supplies used in the emergency hospital for re-dressings, and in decreased ambulance calls.

The committee report is something which you will have to take home with you and read over carefully. It gives a very definite analysis of all of the principal educational methods which will aid in the reduction of accidents.

There are a few very definite things that it is well to bear in mind in applying educational methods. One is to have a very carefully formed organization which ought to be centralized, and provided with suitable mediums to work with. One of the best mediums for dissemination of knowledge is a little Works paper, such as Current News, which is published at our local works. It covers First Aid, Prone Pressure Method of Resuscitation, uses of Safety Devices, etc., so that the working men can have direct contact with all of the safety efforts and activities.

Another important thing is to use your foreman very extensively as a medium through which to work. He is the king pin in the game. If you want to accomplish any result in the way of reducing accidents by educational means, there is no one who can do so much as your foreman, and if you can get his co-operation you have taken a big step. He is in direct contact with the men, he can make safety recommendations, he can see how suggestions are being followed. We have found, by taking an interest in these men, consulting them, and getting them to co-operate with us, that they have really helped us the most in making progress along the lines of safety, hygiene and co-peration.

There is one other thought that I want to leave with you before throwing the meeting open to general discussion: the great plea of your committee is that educational methods be used to a very much greater degree than at present in this work. There is a tremendous field for it, and the most interesting thing about it is that not only can you use educational means for accomplishing great works along these lines, but for so many other things in your organization. You can use education as a means of reducing expense, as a means of developing closer co-operation, as a means of getting better relationships between the company and the people who live near the company; and better relations with the press. And you will find that you can accomplish by educational means a very great deal at very small expense. This is the message that we have tried to bring out here in this little paper, that education is the one medium that will bring about a very large reduction in expenses due to accidents at the present time.

REPORT OF COMMITTEE ON SAFETY, HYGIENE AND CO-OPERATION

Industrial safety and hygiene are today attracting the attention of all progressive employers of labor, and it is now generally recognized that successful results along these lines can be accomplished only through a spirit of mutual co-operation and understanding between the employe and the employer. With this in view your committee has made a careful survey of the situation and reports as follows:

SAFETY

The growth of industrial plants in the United States has been little short of marvelous and the wonder and admiration of the whole world. New factories and industrial establishments have appeared as if by magic. The growth was so rapid that it required the best efforts of those in control to provide sufficient capacity to meet the demands of the trade and there was little or no opportunity for the consideration of anything other than output.

In the early days the processes were simple and much of the work was done by hand with little or no danger to the workman. Today the work of many hands is done by intricate and ponderous machinery. The processes of manufacture and production have become complex and require the exercise of the greatest care and constant watchfulness to prevent accidents.

SAFEGUARDS

Industry was gradually awakening to the frightful cost of trade accidents and employers were considering ways and means of accident prevention. The subject was first approached largely from the standpoint of safeguarding dangerous machinery. Laws were passed by many states requiring the installation of certain safety devices. It was the general opinion among engineers and others interested in the subject that thorough safeguarding would prevent by far the greater portion of industrial accidents.

Progressive employers made every effort to properly guard dangerous machinery. Gears were covered, projecting set screws were countersunk, and belts and shafting were guarded. Experts were employed to see that the work was properly and thoroughly done. Many companies adopted a rule that all specifications and drawings for new machinery should be checked for safety before bids were asked. Manufacturers of machines and tools promptly took up the work and furnished all necessary safeguards.

Wonderful and commendable progress has been made, not only in the installation of safeguards, but also in the equally important matters of providing better lighting facilities, better sanitary appliances and better working conditions in general.

It was learned early in the campaign that a general appearance of neatness and good order, in and about factory buildings and yards, was a most important element in safety work. The workman who adheres to the rule "A place for everything and everything in its place" is of necessity a careful workman and one who will perform dangerous work in a safe manner. Neat and clean surroundings have an undoubted influence for care on the part of the individual. If, on the other hand, he is required to work amid scenes of disorder, if the factory floors are littered with refuse and loose materials, he will become careless and slovenly in his habits, do his work in a slipshod manner and be much more liable to injury.

While many industrial accidents have been prevented by the thorough safeguarding of machinery and by providing better lighting facilities, together with clean and neat surroundings, those employers who hoped to practically eliminate accidents by such installations were doomed to disappointment. The safety device, as a mere mechanical installation, has fallen far short of the good results that were hopefully predicted for it.

Those who have made a study of the subject know that a comparatively small percentage of industrial accidents are due to the lack of proper safeguards, or to dangerous machinery or unsafe places, and that the great majority of such casualties are directly attributable to the carelessness or forgetfulness of the injured man or his fellow workman.

When the workman has been protected against danger solely by means of mechanical safeguards, a comparatively short step has been taken in the direction of actual prevention, as the best devices in the world cannot protect a man against his own thoughtlessness or foolhardiness.

The mechanical safeguard has prevented many serious and fatal accidents and cannot be condemned merely because it has failed to meet the expectations of those who were of the opinion that the general use of such devices would practically eliminate all accidents. It is the first duty of the employer to furnish a reasonably safe place in which to work, and to protect his workmen as far as possible by means of proper safeguards, good light and ventilation. Thorough and painstaking effort upon the part of the employer to make his plant as safe as possible by careful safeguarding, also has an important educational value, in that it tends to convince the workman that the management is sincere when it says that "Safety is the first consideration." If the employer has not done everything in his power to make his plant reasonably safe he cannot expect his workmen to take a very keen interest in the safety campaign.

In the last analysis, however, the value of even the mechanical safety device depends upon human efficiency. The human element is the one most important factor in safety work. That element can be reached and controlled only by education. The law can require the installation of safety devices, it can demand that all gears shall be covered and make rules and regulations as to light and ventilation, but when the employer has complied with every such demand, he has completed only the first step in the problem of accident prevention.

While the reckless disregard of the workman for his own safety and that of his fellow worker is often little short of astounding, he is very likely to resent any scheme or plan to protect him from himself. In his vigorous manhood he scorns the idea and feels fully capable of caring for his own safety.

Then again it often seems that he is inclined to exercise less care and prudence as the conditions under which he labors become less hazardous. He is likely to exhibit less alertness of mind and activity of body as he realizes that he is being mechanically protected from danger and to depend less and less upon himself and his ability to think.

The employe must thoroughly understand that the attempt to protect him mechanically is not because of any doubt in his ability to care for himself under usual and ordinary conditions, nor is it with the idea of relieving him from thinking and acting for himself. He must learn not only the true worth and necessity of mechanical protection, but also that his safety and that of his fellows largely depend upon his constant thought and care in going about his daily tasks.

Safety is a habit and psychologists tell us that habits are formed through paths of least resistance, bringing the greatest momentary satisfaction.

The safety habit—cautiousness—comes from frequent realization of consequences of dangers avoided. A cautious person is seldom injured; when he is injured it is usually the result of some distracting circumstance or lack of concentration upon the task immediately in hand. A cautious individual will not invite danger, will avoid chances, cannot be tempted into recklessness and always involuntarily visualizes the consequences of an accident before taking a risk. For this reason education is the the most effective medium of developing habits of caution.

"The best safety device known is a careful man," but the safety habit cannot be developed in a week or month. Some men are naturally cautious, but the great majority are prone to "take a chance" and acquire habits of care only as a result of long and continued training and education. The safety habit can come only through the gradual building up of a spirit of helpfulness, one for another, a feeling of responsibility for one's own safety and the safety of his fellows and a "get together" spirit that means co-operation. Such upbuilding is possible only by means of thorough organization, education and keeping everlastingly at it.

ORGANIZATION

The value of thorough organization for safety work has been clearly demonstrated in many industrial plants. Such organization is just as essential to the safety movement in the smaller plants as in those employing thousands of men. The size and character of the organization must be adjusted to fit the nature and extent of the operations in each plant.

The general supervision of all matters pertaining to safety, including safeguarding, education, medical staff, nurses and first aid should be delegated to a single officer or employe. In order to be successful, however, such officer must have the hearty and enthusiastic support of the management as its attitude is quickly reflected throughout every plant and department of the company.

The safety director should bring to his aid one or more safety committees as the situation may demand. In a large company, comprising several different plants, there should be a general or central safety committee composed of at least one representative from each plant. This committee should act as a clearing house for all safety information, and consider all suggestions, received from the various plant committees. Each plant, as well as each department of the plant, should also have its separate committees. Committees composed of the workmen—the men on the job—have been found to be an important aid to the work. Many valuable suggestions as to safeguards, prevention of bad practices and elimination of dangerous places have come from such committees. The members of workmen's committees should serve for a stated period and then be replaced by others, so that as many men as possible may be directly connected with the work.

It is the duty of all such committees to make periodical inspections of their respective plants and departments and not only recommend the placing of proper safeguards, but see that the men are instructed as to hazards, that dangerous practices are eliminated, that all places are kept as clean and neat as possible and that adequate lighting facilities are installed and maintained. They should also make a careful study of all serious accidents with a view to preventing their repetition.

The various committees must necessarily work in harmony and be ready for any emergency and for new situations as they develop. A safety organization formed along these lines, if properly managed, is bound to be effective.

FIRST AID AND EMERGENCY HOSPITALS

The company surgeon is a most important member of the safety organization and should be directly connected with one or more of the safety committees.

There should be a first aid crew in each department and it is the duty of the surgeon to see that they are properly instructed. The severity of the injury is, in many cases, greatly lessened by prompt and efficient first aid. First aid should never be given where the doctor is close at hand, but it is quite important in those plants in which a surgeon is not in constant attendance or where the work is carried on in isolated places.

Every plant should be equipped with an adequate emergency hospital. The size and equipment of the hospital must necessarily depend upon the number of men employed and the character of the work. In a very small plant a well-selected first aid cabinet may be sufficient. In the larger plants the hospital should be in charge of a surgeon or trained nurse during every working hour of the day. The men are directed to report to the hospital for treatment of the slightest injury, and it is, therefore, important to have a competent person in attendance at all times.

Prompt medical and surgical attention is the means of preventing many cases of infection and reduces the length of disability resulting from the injury.

THE FOREMAN

The foreman is the one most important individual in any safety organization. The success of the safety movement is largely dependent upon the relations existing between the foreman and his men. His importance is due to the fact that he is in personal touch with his men and in direct charge of their work. He should have a thorough knowledge of the safety rules and the safety and welfare of those working under him should be uppermost in his mind at all times.

It is his duty to prevent dangerous practices and to instruct the men as to the dangers of their work. He is also responsible for the proper safeguarding of the machinery in his charge and must see to it that the guards are kept in place. He must be careful to conform to all safety rules himself, as a violation of such rules by the foreman is not only dangerous in itself, but sets a bad example for his men.

The foreman should be thoroughly instructed, not only in accident prevention work, but also in first aid. When an accident does occur it is the usual rule to notify the foreman immediately. It is his duty to see that the necessary first aid is administered and that the injured person has medical attention as soon as possible. He deals directly with the surgeon and emergency hospital.

The foreman usually has every facility for instituting the work of accident prevention and in exercising discipline if necessary to make conditions safe. There is an increasing tendency to hold him responsible for all accidents in his department, and while such rule undoubtedly works a hardship in a few cases, it is a fact that most accidents, if carefully analyzed, can be traced directly or indirectly to the foreman.

EDUCATION

As stated above, the safety habit can come only through the gradual building up of a spirit of co-operation. It is not the purpose of your committee to recommend any particular line of educational work but rather to point out the various methods that have been successfully employed, with certain suggestions as to their use.

SAFETY RULE BOOKS

Such rules should be made as short and concise as possible, and each rule should be clearly and distinctly stated so that every employe who is able to read may thoroughly understand it. Every rule book may contain certain precautions applicable to all plants, but there are purely local conditions existing in every plant that require special attention. Some employers have found it advisable to issue separate books covering each department of a plant.

It is not sufficient to merely hand an employe a rule book. The employer must see to it that the rules are read and thoroughly understood. Periodical examinations should be conducted for this purpose. It is especially important that the foremen should undergo a thorough examination.

BULLETIN BOARDS

These should be uniform in design and construction as the material therefor is often prepared in the general office and sent to the various plants for posting. They are utilized for giving notices of meetings, descriptions of accidents and for displaying photographs, prints and posters. Care should be taken to make them attractive, and frequent changes in contents should be made. It is an excellent device for keeping the workmen informed as to all matters pertaining to safety.

LECTURES, LANTERN SLIDES AND MOVING PICTURES

Lectures have proved of great value in impressing upon the workmen the absolute necessity for the exercise of care in their daily work. With the aid of the stereopticon and moving pictures the lecturer is enabled to show clearly the inherent dangers of the particular industry and point out dangerous practices to be avoided. Such lectures should be given periodically and whenever possible the families of the workmen should be invited to attend. The wives and children of the workmen have shown a keen interest in the safety campaign. Not only safety films but those of a general educational nature may be used to great advantage.

COMPETITION AMONG DEPARTMENTS

Friendly competition among the various departments in an endeavor to reduce accidents has been one of the greatest aids in the safety campaign. The usual plan is to give each departmen a certain rating based upon its previous accident experience. The department showing the greatest percentage of reduction for a given period is the winner. Prizes are frequently awarded to the successful departments. The workmen take great interest in such contests and anxiously watch for the publication of the results.

BONUS SYSTEM

From the scheme of friendly rivalry among various departments has come a system of cash bonuses to department heads and foremen, who succeeded in showing a reduction of accidents in their respective departments. The writers are familiar with the experience of one company that has adopted such a plan upon an elaborate scale, and they are able to show a remarkable reduction in their accident rate.

WORKS PAPER

Many employers issue weekly, monthly or quarterly publications for the benefit of their employes. Some are confined solely to safety matters while others contain general news items and personal notes of interest to the workmen. Under proper management such publications are most effective in keeping up a general interest in the safety campaign and in fostering the spirit of co-operation among the entire working force.

THE NATIONAL SAFETY COUNCIL

The one most important educational force in the safety movement is The National Safety Council. The organization acts as a clearing house of general information pertaining to safety and through the medium of weekly bulletins furnishes to employers all that is latest and best in the campaign for the reduction of accidents.

The growth of the council has been rapid and local councils have been established in most of our large industrial centers. The officers and directors are men who have given careful thought and study to accident prevention and are recognized authorities in the work. The council is rendering valuable service and is deserving of the enthusiastic support of everyone interested in accident prevention.

While it is the first duty of the employer, for reasons above stated, to see that his plant is thoroughly safeguarded, it is the opinion of your committee that the great majority of industrial accidents can be prevented only through the hearty and enthusiastic co-operation of the entire working force. Such co-operation can be obtained only by means of organized safety work, education and keeping everlastingly at it.

INDUSTRIAL HYGIENE

It is a wonderful achievement to relieve suffering, but it is far greater to remove the causes of disease and poverty. In the past we have been accustomed to depend solely upon capital and inventive genius to increase our productivity, but we have come, within the last few years, to a realization of the fact that the most important elements in industrial progress are human efficiency and health.

The successful operator makes a careful study of every piece of machinery under his supervision. He knows its every fault and weakness, he knows under what conditions it is likely to fail and just when it will show its greatest efficiency. He knows these things because it is to his interest to be thoroughly familiar with every part of the mechanical end of his business.

In recent years the progressive employer has given equally careful attention to the health and physical well-being of his employes. One of our leading manufacturers has said, "Welfare of the worker aside from the humanitarian side of the subject has a practical side, which has carried conviction to many employers of labor, that it is good business to conserve life and health and that in such conservatism one of the most important items of economy in production is secured." While the primary motive for conserving the health of the worker must necessarily be humanitarian, still the financial and moral gain and improvement in permanent efficiency will compensate to a large degree for any expenditure of time, effort or money which may be made by the employer.

The problem pertaining to the health of the working force, which today confront the employer, are due largely to the rapid growth of industry and industrial establishments in this country. The workshops have grown from small beginnings to huge plants employing thousands of workmen. Sparsely settled communities have become cities practically overnight.

Dr. Darlington, an acknowledged expert upon all matters pertaining to industrial hygiene and sanitation, has said "The responsibility for solving these health problems is divided among three groups:

1. The people themselves, who should take care of matters of personal hygiene.

2. The company, chiefly within the limits of its works.

3. The community or the state in making and enforcing health laws.

This responsibility is so interlocked among the three groups that it is sometimes difficult to know where the duty of one commences and the other leaves off. The problem can never be solved without co-operation and if co-operation is to exist it can only come through education, the education of all concerned."

As in the case of safety work, such co-operation cannot be obtained in a day or a year. Men who have been accustomed to unsanitary living cannot be expected to change their habits immediately. They are likely to resent any attempt to force new conditions upon them. The campaign of education, to be successful, must be conducted with all the tact and good judgment at our command.

The logical place for beginning such work is within the plant. Example is the best teacher. If proper sanitary appliances are furnished to the men, during working hours, they soon begin to appreciate their value and it is not long until they are demanding the same comforts and advantages for their wives and children. If his daily work is carried on amid bright and cheerful surroundings with the comforts and advantages that come from proper sanitary appliances, he will not tolerate less favorable conditions at home.

The more important matters relating to health within the plant that must be considered by the employer, are: pure drinking water; clean and well ventilated water closets; clean and attractive yards; protection from fumes and dust; adequate bathing and washing facilities; light and ventilation and lunch rooms or restaurants.

PURE DRINKING WATER

Polluted drinking water is a most prolific cause of disease and it is imperative that all sources of supply should be carefully guarded and frequent analyses made to determine its quality. The progressive employer has abolished the common drinking cup and water is furnished by means of sanitary drinking fountains, placed at convenient locations throughout the plant.

The fountains should be white and clean in appearance. When necessary the water should be artificially cooled, and kept at an even temperature, this is especially true in certain industries, wherein the men are exposed to excessive heat.

LOCKERS AND WASHING FACILITIES

Every workman should be furnished a separate locker and a proper place to change his clothing before and after working hours. The daily bath is of especial value to those who work hard physically, as physicians tell us that it not only promotes cleanliness, but also relieves fatigue. Shower baths should be provided and every inducement given to the men to make use of them. The educational value of the workman being able to return home after his day's work, in a clean and neat condition, cannot be over-estimated. In equipping washrooms, it has been found advisable to eliminate the wash bowl or basin and to substitute the spray or running water. In constructing toilets, locker rooms and wash rooms, special attention should be given to light and ventilation. Those employers, who have made a careful study of the problem, recommend a number of small installations, rather than a few large ones.

CLEAN AND ATTRACTIVE SURROUNDINGS

Pleasant and cheerful surroundings in workshops and yards have a most important influence upon the health and safety of the workmen. Clean yards, grass plots and flowers have a very beneficial effect on the minds of men. The average man would deem it impossible to grow grass and flowers inside a steel mill, but today many attractive grass plots and flower gardens are maintained. That they are appreciated by the workmen is shown by the interest and care which they give to them. A visitor to a large steel works asked the manager whether they were making steel or growing flowers. The manager replied: "We are primarily engaged in making steel; but we make better steel and more of it by also raising flowers, and having them in our yards."

FUMES AND DUST

The dangers of working in a dust-laden atmosphere are well known. By far the greater proportion of occupational diseases are due to dust. Dr. Darlington states, "More than fifty years ago the fact that a large number of persons who worked in certain industries in which the processes involve dust production died from disease of the lungs was noted in vital statistics. This mortality was observed as occurring particularly among tool grinders who breathed a mixture of steel and stone dust. So prevalent was lung disease originating from this cause that it was called grinders' asthma, a slow form of consumption."

Dust as well as fumes may be removed, and all danger from these sources avoided, by the installation of dust arrestors or exhaust systems. Where such installation is impracticable, respirators should be worn.

THE VISITING OR DISTRICT NURSE

While the work of education must necessarily begin in the plant, many employers have found it advantageous to extend the work to the homes of their employes, through the visiting nurse. The work has proved to be especially beneficial to those companies employing large numbers of foreigners.

It is difficult to describe the various duties of the visiting nurse. The field is practically unlimited. She must make her own way and first gain the confidence and respect of her charges by the exercise of tact and good judgment. Her chief duties are to visit the homes of employes, make suggestions as to the proper preparation of food, assist in cases of illness, help the mother in the care and feeding of babies and give instruction in general matters pertaining to proper ventilation and cleanliness in the home.

Many visiting nurses have also organized Little Mothers' Clubs and Household Centers, in which the younger girls are taught the essential elements of good housekeeping. It has been our good fortune in several instances to observe the effect of the work of visiting nurses, and the wonderful improvements in living conditions in an entire community brought about by their activities have been little short of marvellous.

Edison has said "Wastefulness in commerce is one of our weakest spots." The greatest economic waste in the world today is the waste of health. The efforts of the employer to conserve the health and happiness of his working force, are primarily humanitarian, but it is also good business.

We have made no reference whatever to the subjects of service annuities, profit-sharing plans, sick and accident benefit funds or saving fund systems. The systems and methods of the various employers in handling these four subjects are so much at variance it would be impossible at this time to digest them in an intelligent form. It will be necessary to gather more data and conduct further investigation and analysis before these subjects can be properly covered in a report.

THE CHAIRMAN: Mr. R. G. Williams of the Norton Company will now address you.

MR. R. G. WILLIAMS (Norton Company): Mr. Chairman, ladies and gentlemen, I was very much interested and pleased in reading over the committee's report. In the discussion I will hold strictly to the subject of safety.

The report shows clearly that the subject received thoughtful consideration by men who are thoroughly familiar with the subject. It traces the movement up to the present time and shows successively that but a few years ago there was an enormous loss to industry directly attributable to accidents, then followed the period of mechanical safeguards when it was believed that by the installation of these guards the majority of accidents could be eliminated, and finally that it has been discovered that in addition to safeguards there is needed co-operation and education.

Under the head of safeguards, beginning at the bottom of page 4, is brought out that the best safeguards in the world can not protect a man against his own thoughtlessness and foolhardiness. In the middle of page 5: "The human element is the one most important factor in safety work. That element can be reached and controlled only by education." And the rest of the paragraph is worthy of serious consideration. On page 6, the first three paragraphs are particularly important. Under organization: "Such officer must have the hearty and enthusiastic support of the management as its attitude is quickly reflected throughout every plant and department of the company." This is something, unfortunately, that a great many managers do not realize. We think it is a good thing to get in a safety man, but that is as far as it goes, and it does not take the men long to realize that fact. Further, on page 7, a workingman's committee is spoken of. Workmen's committees are very valuable.

Once a man serves on a committee he is a permanent booster for safety.

Another paragraph in the report should also receive emphasis: "There is an increasing tendency to hold the foreman responsible for the accidents in his department." Such a plan may seem severe in some cases but where it has been tried it has been very successful. As you all know, the foreman is nearest to the men, is around among the men talking to them, and is in closer touch with everything that concerns the operation in your factories than any other man.

Then there are paragraphs on education, safety rule books and bulletin boards, lectures, lantern slides and moving pictures, bonus systems and works papers, and, also, competition among the departments. That has been worked with a great deal of success in many plants. It is the idea of putting the game spirit into the movement. For instance, you have a pile of stones in a lot, and you want to get rid of them. If you ask a number of boys to throw them into the swamp they will be insulted, but if, instead of that, you bet them that they cannot hit a certain object—a certain leaf out in the pond—and you pick up the top stone and see if you can hit it yourself, they will get busy in a minute and it will not be any time until the whole pile has disappeared.

The National Safety Council is successful because of the interest and activity of the men back of this work. The names of such men as Campbell and Young, Ralph Richards, Morey, Palmer and C. W. Price of Wisconsin mean much in safety circles. They are very largely responsible and instrumental in the accomplishment of this great safety movement.

Then the question of payment to those made dependent by industrial accidents is something that everybody appreciates, and in a great many of the States there are rigid laws passed which take care of this.

As to the question of physical examination you are probably familar with the fact that organized labor is making a very strong fight against compulsory physical examinations of employes, particularly in the States of New York and Ohio, and I think that without any question the fight has been instigated, nursed and fostered by labor agitators who realize that physical examination is the first thing that they have been able to put their fingers on in the safety movement. They are playing that fact for all it is worth, for they realize that the safety movement gives the employer a means of approaching the working man on a plane which the working man will accept, and permits the employer to educate the working man and show him that the employer is not quite such a fiery dragon as he has been led to believe. The labor agitator is afraid he will lose his job, and he has selected this as the thing he has been able to get hold of in his effort to turn the tide in the opposite direction. It is something which we will all have to deal with in the immediate future more than ever in the past, and it is a very good thing to be forewarned, because forewarned should mean forearmed.

Now in conclusion, the last paragraph here on page 6, under safeguards: "The safety habit can only come through the gradual building up of a spirit of helpfulness one for another, a feeling of responsibility for one's own safety and the safety of his fellows, and a get-together spirit that means co-operation." And the wonderful thing about the gospel of safety is this, that when once it gets into you, although you are unconscious of it at first there soon comes the spirit of helpfulness one for another, a feeling of responsibility for one's neighbor, and a get-together spirit which accomplishes results. (Applause.)

THE CHAIRMAN: Dr. W. Irving Clark of the Norton Company will now address you.

DR. W. IRVING CLARK (Norton Company): Gentlemen, I am going to speak upon two things today, one is physical examinations and the other is the prevention of sickness in the men. It is not distinctly under the subject of hygiene as reported by the committee, but it is very close to it, and I think it is one of the fundamentals of the movement.

You cannot have proper hygiene in your factory unless you have gone into the physical condition of your men. In this question of physical examination, the first question asked me by people who have not instituted physical examinations is, "How do the men take it?" Gentlemen, I find that the men take it not only well, but with a great deal of enthusiasm. They like it. I think that fifty per cent. of the men I examine make some favorable comment upon leaving the examination room. The others, in the majority of cases, are people who are not able to express themselves because they are foreigners.

The examination is rather an interesting question. A man comes right in out of the street, and the first thing that happens to him, after he passes through the hiring clerk's hands, is the physical examination. It is an absolutely novel and strange experience for him, and one would expect there would be a great deal of trouble, but there is not. The men take to it very well, and when it is over they appreciate it. I have had men tell me that they were very glad to have had that examination, because now they felt that they knew something about their own conditions.

Now, after an examination, you have a record of the man's defects, you can warn him against the things that will be injurious to him, and you can also enlist the co-operation of the superintendent and through him that of the foreman in arranging so that the man can work without injuring himself.

I am going to give you an instance of the reverse: We had a man who had an enlarged heart, which was giving him no trouble whatever. He was in the proper department; he was doing perfectly satisfactory work, and he had no symptoms. He left the employ of the company and was away for a period of about six months. When he came back to the company he was admitted without examination, as we already had him on record. Unfortunately he was put on heavy work as soon as he got back because we had not at that time re-notified his department that he had trouble with his heart, a thing that he should have done. Such a mistake will never happen again. That man was put at heavy work, and the result was acute dilation of his heart. As soon as we learned the situation we quickly changed his work; since then he has completely recovered. Here was a man who knew all about his condition, and yet because his foreman had not been instructed we got bad results; so you must have co-operation on the part of the man, the foreman and the doctor. That can be obtained, and is obtained in the majority of cases. We have a very large number of men with bad hearts who are working in the Norton Company without any trouble at all. These men know what their conditions are and I have a record of a number of cases where the heart trouble is improving so the men realize as we do that it is to their advantage for us to work together. I have records of cases where hearts have reduced over an inch in size. Men on the point of having broken compensation of the heart when they came to the factory, as revealed by examination, have worked, and doing the work that has been selected for them, have improved instead of getting worse. Is that doing the men any harm?

Now let us consider the question of sickness among shop employes. I am taking this up because I think that some day or other we shall have to face the question of sickness compensation. I do not know when it is coming, but it looks as if we should have to meet it some time, and it is a good idea to investigate the subject.

For the last four years we have been trying to make the Norton Hospital into a diagnostic clearing house, and I think that is the ideal condition when the plant is situated in a city, and the men can have their own doctors. There is also a large hospital to which men can be sent if necessary. This question of sickness is a very significant question and a very real question. The amount of time which is lost by sickness is about ten or fifteen times that of the time lost by accident, if you have a first aid hospital. This is about the way it ordinarily works where there is no shop hospital: A man does not feel well, he applies home remedies and tries to keep going, but finally he feels so sick that he stays at home for a few days but does not feel any better. He keeps getting worse instead of better, and at last he becomes a pretty sick man. If you have a hospital which is prepared to examine these men and diagnose their conditions as soon as they become ill, the number of absences due to sickness which is curable if taken in time is reduced to almost nothing. In the first place the employe does not run the risk of being worn out by a serious sickness, since he is attended to immediately by the doctor, and as a result the loss of time is very materially reduced.

Undoubtedly in a good many cases we have saved life. For instance, take the case of appendicitis—here we sent the man immediately to the hospital, but if he had not been seen by a doctor and his case diagnosed promptly it is very doubtful if he would have recovered.

Then there are the benefits that are to be derived from hygiene. I cannot go into that general discussion as hygiene is entirely too large a subject for me to take up in the time allowed me.

THE CHAIRMAN: Is Mr. Jeppson present?

MR. GEORGE N. JEPPSON (Norton Company): Mr. Chairman, ladies and gentlemen, I have been asked to say something about the "fun side" of the life of the Norton Company. Most of us here feel that doing a good day's work is fun. But from time to time we get together to blow off our surplus energies outside of working hours.

In many plants this recreation is organized and called welfare work. With us, the work is spontaneous and the good times originate with some Norton man or woman.

This business was started in fun. Back in '75 or '76 an old Dutchman in the pottery of F. B. Norton experimented on making a grinding wheel of shellac. He made at least one and had it running on the bell spindle of the governor of the little engine in the shop, the only one available. A Swedish potter came along and bet him a gallon of beer that he could make a better wheel: He conceived the idea that a clay that would vitrify in the potter's kiln would, when mixed with an abrasive, make a wheel that would beat the Dutchman's, and he won the bet. This idea is the one used in all vitrified wheels.

From 1878 to 1890 this was a small business. During this time whenever a large order was received or a specially good kiln drawn, all hands, from the general manager down, would drop work to celebrate with a little liquid refreshment of an amber hue poured from a great stoneware pitcher.

As the plan became larger, we had to have more discipline among ourselves and our celebrations came at regular intervals. The majority of our workmen were Swedish and the celebration of Mid-Summers Day by picnics, and Christmas by a jollification, went on until the Christmas celebration had to be stopped because we did not have a room large enough for it, and the weather here in December is not propitious for outdoor celebrations.

We had the same Board of Directors from 1885 to 1912 They grew up with the business; had an intimate acquaintance with the men and have always been in an attitude of sympathetic waiting for any sort of a proposition that would make the life of our Norton family happier.

Today, we are a large family, and while there is still some of this spontaneous fun, we find that most of it is created by the different factory organizations.

We have a baseball league of four teams, representing the offices and factories of the two plants. We have a good ball field. We have a lawn tennis club that has an annual tournament. We have several bowling clubs; a Glee Club that practices on the company's time once a week; gymnasium classes for men and women during the winter; a Mutual Benefit Association among the employes—the dues are 25 cents a month; $6 a week paid for ten weeks in sick benefits; $100 on death of man; $50 on death of his wife. Safety First Association ran a series of lectures for the men and their wives during the winter.

The Agricultural Society was started in the spring of 1914. We had a lot of vacant land to the west of the plant and thought if the men wanted it we would plow it up. A notice was posted and 90 men asked for lots. These lots are 50x75. It would have done you good to see how men, women and children worked on this land. Some of them grew all their own garden truck and sold $25 worth besides. We grew so enthusiastic over this experiment that we concluded the garden season by having a Folk Fest, at which 3,000 people were present. We had a parade with brass bands, suffragettes, farmers, fire departments and all the rest of the organizations in the plant. We had in this hall a very worthy exhibit of the product of the gardens and we ended the celebration with folk dancing and a bon-fire on the top of the hill. This spring we again posted notices and 209 farmers applied for lots. About 18 acres are now under cultivation. In March and April the Agricultural Society ran a series of lectures on practical agriculture.

The Indian Hill Homes—this is a subject on which we could spend a whole evening. In a few words, we recognize that the better our men are housed, the healthier, happier and more efficient they are. We also know that the inexperienced person who buys land at a boom sale and who lets the building of his house without proper planning and without competition, who has to have a second mortgage at a rate of from 8% to 14%, has taken upon himself a rather serious contract and a worry that makes most men inefficient.

We are putting our business experience, our organization, financial and engineering, back of a real estate proposition to provide cottage homes for our men. We shall offer these houses to Norton men first. If they do not want them, we shall sell to those who do. Our object is to make a very beautiful piece of land into a community of workmen's homes at no financial profit to ourselves. We do expect that if this community is a success that its inhabitants will gravitate towards this shop and we expect that these men will be better men than those produced from tenement houses.

We find that our men want to run their own affairs and that most of the time they can generally do it better than when some person outside attempts to direct. We believe also that our social life has been very much improved by having this hall. Generally the factory office building is looked upon with awe, and as a place for the man who wears a clean collar. During the winter this hall is used from four to five nights a week, and our men have come to look upon this building as a part of their own.

I want to thank you for your attention and during the week should you desire to go into the detail of any part of this work, we shall be very glad to give you any information available. (Applause.)

THE CHAIRMAN: Dr. Risteen of the Travelers Insurance Company.

DR. A. D. RISTEEN (Travelers Insurance Company): Mr. Chairman, ladies and gentlemen, the corporation with which I am associated gives a gold medal each year in recognition of eminent progress in safety work. We provide the medal, but the actual awarding of it is made by a disinterested committee appointed for the purpose by the American Museum of Safety.

The committee that has prepared the excellent report that has been submitted to you on safety, hygiene and co-operation, consists of three members, representing three separate corporations. Two of these, namely The United States Steel Corporation in 1910, and The New York Edison Company in 1912, have already received our medal. The third member of your committee, Mr. Ashe, represents the General Electric Company, which has not as yet received The Travelers medal, but it *has* received the Rathenau gold medal, which is awarded by the same committee, and for like reasons. I thought it would be of interest to call your attention to these facts, because they show

how wisely your own committee was selected, and how competent they are to speak.

Your committee's report is an excellent one in all respects, and let me assure you it also shows evidence, to one who has been engaged in this kind of work for a number of years, of a great deal of earnest thought and labor. I have no points to criticise in connection with it, but my remarks will be confined to supplementing it in a few respects.

The only approach to criticism that I could make would be in connection with a passage on page 3, where reference is made to "laws passed in many states, requiring the installation of certain safety devices." If it is the purpose of this passage to give credit to the Solons of our legislatures for starting the safety movement in the United States, I think this is a mistake, unless we wish to go back to the time when there were merely general laws fixing the responsibility of employers, requiring householders to remove the ice from their walks, and governing other matters more or less general in nature. The subject of safety for its own sake was first brought out, if I remember correctly, by the insurance companies, and by some of the larger and more enlightened employers of labor who saw that it would be advantageous to themselves and to the community, from every point of view, to go systematically into the prevention of industrial accidents.

I wish to emphasize what your committee says with regard to the safety device, as a mechanical preventive, that it has fallen far short of the good results that were hoped for, in connection with it, by those who had not given the subject any great study. Safety devices are exceedingly important things, and I would not say anything that could be construed as representing indifference toward them, or lack of interest in them. The point is, that they are not *magical* things; and it is certainly the height of folly for us to put in a lot of safety devices and then say to ourselves, "We have fixed up this safety matter, so now let us think of something else." Eternal vigilance is the price of safety. The safety device is very important, but a great deal more depends upon the character of the workers, and upon their ideals, than upon the material means of protection that are provided. By way of illustration, let us assume that there are two shops, identical in every way except in regard to the safeguarding and the character of the workers. Shop A, let us say, is provided with all the safeguards that intelligent thought on the part of the safety committee could suggest, but the workmen there are a careless and indifferent lot. In shop B, on the other hand, there is not a single safeguard, but the workmen are careful and thoughtful, and they keep their minds on what they are doing. Under the assumed conditions, the number of accidents, beyond all doubt, would be far greater in the guarded shop than in the one that is unguarded.

The Germans have done wonders in the way of cultivating the safety spirit among their workers, and Great Britain is certainly a very close second. In Germany, in particular, they begin with the children, and teach them safety principles and respect for authority. They catch the future citizen while he is young, and bend his mind in the right direction while it is still pliant and yielding.

To illustrate the results they obtain I am going to tell you of an incident that a friend of mine saw while sitting in a hotel in Münich looking out of the window. A little boy, perhaps ten years of age, was playing with a ball, and after he had thrown it up and caught it successfully a number of times it got away from him and rolled over on a plot of grass. Instinctively the boy started for it, but noticing a sign which said that it was "verboten," or "forbidden" to step on the grass, he stopped, considered the problem a moment, and then went away out of sight. He presently returned with a rake, with which he pulled the ball out where he could reach it, and then he went away carrying both the rake and the ball with him. You will particularly note, in connection with this incident, that the boy did not know that he was being watched. He did this thing as the result of his training and not through any fear of punishment in consequence of stepping on the grass on this particular occasion.

We can hardly think of the American boy acting in this way. I will leave it to you to judge if the attitude of Young America is not more fairly represented by the following little story which I picked up somewhere in the public press not long ago. Although it is fiction, it takes what point it may have from its painful realism. A man going down a country road asked a boy if there was any good fishing in the neighborhood. "Sure," said the boy. "Go down the road here for half a mile till you see a sign which says '*No* trespassing.' Go in there, and keep on till you come to a fence where there's another sign that says '*Beware of the bull—keep out.*' Go through that pasture, and pretty soon you'll come to a brook where there's a sign that says '*No fishing allowed.*' Drop in the big pool there, and you ought to catch seven or eight."

It is characteristic of us, that we do not believe in signs. I do not need to cite examples. Every one of you could think of hundreds of them.

To bring our workers up to the level of those of Great Britain and Germany, so far as care is concerned, we have a monumental task before us. A great deal can be done, no doubt, by agitating the subject and doing everything possible to show it up to our workers in its proper light. We should strive to make it plain that the movement is primarily for their benefit. It is true that it is "good business" for an employer to prevent accidents, but after all it is the workers who have the most to gain from a safety campaign, because they are the ones who are hurt, and the ones whose earning capacity and general welfare are imperiled. The employer can settle his part of the damage by the payment of money, but the workman has to pay in pain and personal mutilation, and often both he and his family must face years of privation on account of diminished earning capacity. If our workmen can only be made to see this, and to believe in it as the fundamental article of their industrial faith, and to adopt it as the mainspring of their every-day conduct, we shall have accomplished a great deal.

As an example of the ill-founded antipathy that workmen often show toward safety devices, I am going to quote a passage from an official report relating to an experience in connection with the Eiffel Tower in Paris. Similar cases could be cited from experience in the United States, but I have thought it wiser to go abroad for my illustration.

"Painted once every six years," says the report, "the Eiffel Tower claims an average of five victims every time the operation is performed. It is the most dangerous job in the world. When, after five painters had met with a terrible death by falling headlong from the structure, the directors proposed that ropes and belts should be provided for men at work on the Tower, the painters rebelled. It was a matter of professional honor and trade vanity with them. In the re-painting carried out in 1895 seven men fell, their bodies crashing deep into the earth. In 1900 the directors endeavored to obtain the services of men who had previously painted the Tower, deeming that their experience would diminish the danger of accident. The men were obtained and agreed to work for the usual pay provided only they were not required to disgrace themselves with life-saving belts and rigging."

I am convinced that the most effective thing to do is to start with our young children, and train them up in the way they should go from their very earliest years. We teach them all manner of things for the cultivation of their minds, and in recent years we have done a good deal in the way of training their hands also; but we have done very little in the way of training them to keep their fingers on their hands, and their eyes in their heads.

The technical schools and colleges have great possibilities in this direction which, speaking broadly, are not utilized. I recently brought the head of one of our leading mechanical engineering schools to start a safety department and to teach the subject systematically, because many of his young men would go out and become executives of one kind or another with the responsibilitiy of the lives and limbs of many employes resting upon them. He was interested but said his course was already overcrowded, and asked what he could omit to make room for this added work. I told him that that question was perfectly easy. My answer would be "Cut out *anything whatsoever.* Nothing you are teaching is half as important as systematic instruction that will help the student to keep himself whole, and to assist others in doing the same." I earnestly believe this to be true, and I shall be interested to see what this particular professor does about it, after he has thought the matter over.

There are just two more points that I wish to make. The first is that although first-aid outfits are exceedingly useful and important, they may be sources of serious trouble unless they are used with skill and judgment. Any surgeon, I am sure, will bear me out in this statement. It is not enough to have an outfit ready at hand, however good it may be. You must have somebody in charge of it who has had careful instruction and training, because great harm may be done by a man with the best of intentions but with no skill. In the present European war, as I have been informed through letters from the other side, many wealthy and well-meaning persons, who have gone into the business of rendering aid to the injured without a suitable course of preliminary study, have done a great deal of harm, and caused much needless suffering. We certainly must respect these persons for taking up such a line of work, but they should always take a full course of study in the art before they undertake to practice it.

Furthermore, in connection with industrial accidents it is important to remember that first-aid treatment should never be anything but what its name implies. It should be used for the relief of suffering and for the preservation of life, until such time as the case can be turned over to a physician or surgeon having wider knowledge and greater skill. Never rely upon your first-aid outfits in any other way—unless, of course, they are in the hands of men comparable, in competence, to a surgeon.

Finally, I wish to say that one of the greatest secrets of success in accident prevention is to see that the suggestions come, so far as possible, from the *employes themselves.* The difference between a suggestion that comes from headquarters *down* the line, and one that comes from the employes *up* the line, is much the same as the difference between one's own baby and somebody else's baby. The employes take a much greater interest in things that they discover and work out for themselves, and one of the strong points of a really clever safety inspector is his ability to be, at appropriate times, just a little bit stupid, so that the workmen, under his well-hidden guidance, may discover the solution to some dangerous situation or practice about one lap before the inspector discovers it himself.

THE CHAIRMAN: Mr. J. C. Robinson is not here so we will now hear from Mr. R. B. Lindsay of the Midvale Steel Company.

MR. R. B. LINDSAY (Midvale Steel Company, Philadelphia, Pennsylvania): Mr. Chairman and delegates, the subject assigned me—that of "Safety, Hygiene and Co-operation"—is rather out of my line, and I would rather not have been called upon, as my knowledge in this direction is limited to a general idea of what my company is doing. My object in attending this convention was to get ideas on Apprentice School work with which I am directly connected. The company I represent has always been deeply interested in its boys and felt that a school conducted on the company's time would prove beneficial to both.

Relative to the subject in discussion, I know that everything is done to safeguard the men both from accident and disease. A most efficient Bureau of Safety has been established for a number of years and every avenue of danger is carefully watched. A number of committees have been appointed, each committee made up of three men, so distributed as to cover the entire plant. Monthly meetings are held, at which time very interesting discussions take place, all ideas being carefully noted and argued pro and con. I understand a very noticeable decrease in accidents is shown on the records, traced mainly to educating the men to be ever on the alert. Of course, there are many places around a steel mill where it is absolutely necessary for men to place themselves in hazardous positions; but the greatest precautions are always taken not to endanger any man more than is absolutely necessary. The company maintains a completely equipped emergency hospital with a regular staff of physicians in attendance day and night. Complete records are kept and the presence of disease germs are carefully watched, negative cultures being made of suspicious cases from time to time. Co-operation, to me, would seem to be the only way whereby the best results can be obtained, as no one man can handle the subject. It requires the combined efforts of each and every one to safeguard the welfare of his fellow man.

In conclusion, permit me to say that I have been greatly benefited by attending the various meetings and round-table discussions where the true thoughts of men are expressed entirely devoid of romance. I thank you for your very kind attention. (Applause.)

THE CHAIRMAN: The discussion is now open to the floor.

MR. P. J. REILLY (Dennison Manufacturing Company): I should like to know from Dr. Clark of the Norton Company if he devotes all of his time to the Norton Company.

DR. W. IRVING CLARK: One and one-half hours in the evening and morning I give and besides a trained nurse is in attendance from morning to six at night. There is also a night nurse.

MR. REILLY: Do you think your relations at the Norton

Company have caused any criticism from the local physicians?

Dr. Clark: None whatever. I have given out much work to men outside that I think has helped the situation. I refuse to take any shop cases at all in my private practice. They send for me often but I refuse to go, and recommend them to other physicians. I think, as I tried to bring out, that the hospital should be a diagnostic clearing house, where we could find out what the trouble is with the man, whether he is sick enough to need a doctor, and if so urge him to go to a doctor. If he has no doctor, we tell him where he can find a good one. Often if the trouble is some little thing that might easily grow worse we give him a very simple treatment which will relieve the situation. We make a great point of seeing to the eyes and ears. It is to the interest of both the company and the man that they be well looked after.

Mr. R. S. Hale (Edison Illuminating Company of Boston): I have just a word or two I would like to say as to what the Boston Edison Company has in mind. The main reason that brought about the education of the men on questions of aid and hygiene was economy. I have been waiting and waiting with a good deal of interest to see if some shop, some company, was not doing something in that line with the series of Red Cross lectures, which I understand cover about twelve lectures reaching up to an examination and certificate. We had in our company last year a set of lectures by our own physicians, and now have been thinking about having this Red Cross series. Our own physicians seem to think that some of the Red Cross lectures are a little bit more than are necessary. Where doctors disagree, I feel that I have to go somewhere else for advice. I should be very much interested to know if any of the corporations or firms represented here have had any experience with the Red Cross text-books and series of lectures and the examinations and certificate they give.

Mr. Sydney W. Ashe (General Electric Company): Mr. Hale, the Consolidated Gas, Electric Light and Power Company, of Baltimore, carried on at the time I was lecturing for them eight years ago a Red Cross First Aid Course with very successful results. We also carried on that course at the Harrison Lamp Works of the General Electric Company a few years ago. I think both of these places could give you a lot of information.

I remember particularly that at Harrison there was a regular class which was made up of about as many men as women, who became very much interested in the subject and it was very helpful.

On the other hand there is considerable instruction which can be given without using the entire Red Cross Course in First Aid. For instance, a series of lectures as mentioned before can be given on accident prevention, prevention of tuberculosis, making of tourniquets, Prone Pressure Method of Resuscitation, and the general care of the injured.

MR. F. O. CLEMENTS (The National Cash Register Company): I certainly feel a little sorry for the manufacturing concerns whose representatives are not present at these meetings, because they are missing so many good things; inspiration and vision.

I would not say that every progressive concern has a safety movement in its plant, but I do believe that every concern that has a safety movement is a progressive concern because of the very fact that you do have departmental contests, with committees on the lookout for the things that are wrong. These committees will give you so many good ideas, and so many suggestions will come to you that you cannot be unprogressive.

A word as to the organization of safety work at The National Cash Register Company. We have fifty department committees varying in number from two to five people, with the foreman as permanent head of the committee, and from these committees we get some exceedingly valuable suggestions. In May, from seven of these committees we received one hundred and one suggestions. That does not mean that we have neglected safety work in times past, for we have been doing health and safety work for many years, not always following the plan as outlined here. However, our present organization conforms quite closely with the recommendations of this committee, and we are getting results. I think the big thing that comes to us outside of the actual benefits from safety work is the inculcation of the spirit of co-operation that goes throughout the organization. We must co-operate with one another to get results. Results are impossible without team work. Safety committees permit close touch with your organization and nothing helps to strengthen the spirit of co-operation like the personal touch.

When you get right down next to your boys and know them, and have them come to you with their troubles and with their aspirations, then you can be sure that they are interested in your safety movement. If you are going to investigate suggestions put in by workmen, go straight to the suggestor himself. Failure to do so, robs you of one of your strongest allies—personal touch. It's good for your organization and the results are really surprising.

I happen to be the chairman of our Central Safety Committee, and I am out on the job quite a bit hunting up these boys, talking to them and trying to increase their loyalty and co-operation. I want to tell you it is worth while, and it is actual fun. (Applause.)

Mr. J. M. Larkin (Fore River Shipbuilding Corporation): The previous speaker said that every concern that was going into safety work or had gone into it, was progressive; so I feel as though I ought to say something on that score, because we want to be considered progressive.

About a year ago we established a safety department in our concern, and it is similar to the departmental committees of other concerns. What I really want to bring out is the reduction that we have been able to make in lost time due to accidents in our plant. We have a very hazardous building business, that is, shipbuilding, but we started last September by appointing a committee for each of our seventeen shops. The foreman acts as permanent chairman. There are two other employes on the committee appointed to serve for three months. Each member who is acting on the safety committee obtains a button saying he is qualified to assist on the safety committee. They wear these buttons, and are very proud of the emblem. They hold weekly meetings in their resident shops and consider items of safety for the individual shop. The recommendations are sent to the Secretary of the General Safety Committee, which is made up of the Vice-President and General Manager, Treasurer, General Superintendent, plant doctor, a representative of the Employes' Benefit Association and one other who acts as secretary. The general committee meets weekly to consider the recommendations that are sent to them by the various shop committees.

During the second three months' period that the campaign had been under way, there was a reduction of eight per cent. in the entire plant in the lost time of employes due to accidents. At the termination of nine months after the campaign was started, there was a reduction of thirty-nine per cent. in the time lost due to accidents. So that we are thoroughly convinced that safety work pays. And not only that, but all our accidents are brought out in our safety department, and we analyze them, that is as to causes and conditions; whether it is more hazardous on ships or in shops or in yards, and so forth; and we find that about forty per cent. of all accidents happened on the ships and sixty per cent. in the shops and yard. We also found that only about seventeen per cent. of the accidents that were happening were accidents that could have been prevented by the use of safeguards. That means that the remaining eighty-three per cent. were accidents that could only have been prevented by care on the part of employes. These figures we have gotten from ten months' experience. They have been very carefully analyzed, and I think show about the conditions that exist in many other concerns.

MR. NORMAN COLLYER (Southern Pacific Company): Mr. President, I am interested in Dr. Clark's view that an industrial hospital should be simply a clearing house with respect to diagnosis. I think the Norton Company makes no charge for services?

DR. CLARK: None at all.

MR. COLLYER: I wish to report a successful policy of the opposite kind followed by the Southern Pacific. We make our employes a compulsory charge of fifty cents per month for which we guarantee, or rather undertake, to maintain their health against sickness and injury. We have some twelve or fifteen different emergency hospitals at different points on the line. We have company physicans at the terminals and in all towns of any size whatever, who give part or all of their time to the company's service. But the most important part of our work is in the general hospital at San Francisco, where cases can be concentrated for treatment and attention. This hospital cost over a million dollars, is situated near Golden Gate Park, and is generally conceded to be the best hospital in the West, both with respect to equipment and management; and we are able to use our transportation facilities to bring cases in there for treatment where we keep them sometimes a year without any charge. Employes appreciate, on the whole, the service given them, feeling that it is much cheaper than they could secure from any hospital association, as indeed it is, and the system is self-supporting, although it costs in excess of $200,000 a year.

Mr. A. W. Earle (Winchester Repeating Arms Company): I have not been here the whole afternoon. Has the question of exit drills been discussed?

The Chairman: Not in the particular detail of which you speak.

Mr. Earle: I do not know whether we all realize that they are coming. In some States they are already compulsory. It is a subject that we might well think of. In our company we have given them a great deal of study and a question I would like to ask is whether any of the gentlemen here have any new ideas along that line. Under some circumstances they become a pretty serious matter. New Jersey, as you know, has compulsory laws, and it will not be very long before some of the other States will enact them. The matter is just as important as "safety-first" work.

Mr. S. W. Ashe (General Electric Company): We have our drill primarily for our girls, and we have a squad of the assistants and the foremen who have certain specific duties which they have to perform in addition. We have certain leaders among the girls, and the alarm system is so arranged that any one who has jurisdiction can pull the alarm at any time, although we do not encourage this because if the fire alarm is turned in, it would be likely to blow the whistle, and that would arouse too much interest in the town. In marching out, the girls stop their work, form in line and march out speedily. We have a fire department in addition to that.

Mr. Earle: Are they moving, in all cases, horizontally through fire doors?

Mr. Ashe: Yes, although the means of exit is changed. Sometimes they will go through one door in one case, but as a rule they have a choice of two exits which they can use.

Mr. Earle: You know that the law in my State is compulsory in regard to having fire escapes, but the ordinary fire escape is a death trap.

Mr. Ashe: We have the building provided with fire escapes. We do not have any fire drills on fire escapes.

Mr. Earle: The point is that we have fire escapes to comply with the law, but our drills are horizontal, and it is expected that the fire department will use the fire escapes as hose ladders.

Mr. Ashe: At our Harrison Works, we had five thousand girls, and they would have as many as one thousand in one building, and I have seen them get one thousand girls out of the building in about two minutes. At Pittsfield we only have four hundred girls, and I have seen those girls gotten out in about forty seconds.

Mr. Earle: Do they have to go downstairs?

Mr. Ashe: Yes, they do.

Mr. Earle: Do you provide guards on these stairs?

Mr. Ashe: No. We have certain girls who go ahead and station themselves at the landings.

Mr. Earle: Is there any one who guards the stairway to prevent a stampede?

Mr. Ashe: We have people on the landings all the way down, and some one at the bottom too.

Mr. Earle: Our organization is primarily an emergency organization. We have our own fire department, consisting of seven companies under a trained fireman, and its business is fire fighting. We have also an emergency corps under this fire chief. It is "up to him" to see that it is efficient. Our firemen have a course of training, just as the men in a municipal fire department. They are trained to know just what to do and where to go.

Mr. Ashe: Do you not have a central fire department in addition to those in each place?

Mr. Earle: In our fire department, each of the companies is divided into four sections, ladder men, hose men, etc.; the plant is divided into tracts, and a fire company being organized in each tract. There is a general company with an automobile equipment which responds to all alarms. A squad is on the scene within from one and one-half to two minutes after the gong sounds and we expect them to do what they can in the five or six minutes before the first city apparatus arrives. They have been very successful. I think the consideration of inside drills is something that is necessary in view of the conditions existing generally.

MR. ASHE: There is one point in that connection I presume you know, and that is that in nearly all buildings which are equipped with fire extinguishers, we have never had one fatal accident yet due to a fire. That is a pretty good record. In other words, that is what the real work of the automatic sprinkler has done for us.

MR. EARLE: We have everything that has been brought out, I guess, in the way of fire protection. What is concerning us now is the emergency or exit drill.

THE CHAIRMAN: Is there any further discussion, ladies and gentlemen? Any further information on the exit drill? We have still about ten minutes, if we care to use it. There being no one desiring to speak, I declare the meeting adjourned.

BANQUET

The Bancroft Hotel, Worcester

THURSDAY EVENING, JUNE 10, 1915

MR. F. C. HENDERSCHOTT, Toastmaster

THE TOASTMASTER: Ladies and gentlemen, having experimented upon our speakers with the color scheme, with fairly good success, I am going to introduce another innovation this evening—a jokeless Toastmaster. In closing our banquet at Philadelphia last year, Mr. Heath said: "We held our first convention in the State of Ohio; we held our second convention in the State of Pennsylvania; we will now adjourn to convene next year in the great State of Massachusetts." Possibly because Mr. Heath used the word "great" Worcester was chosen as our convention city this year.

Notwithstanding the earnest pleadings of the Norton Companies, backed by the American Steel and Wire Company, I am of the opinion that we should have come to Worcester anyhow. (Applause.) The magnificent spirit of industry manifested by your city, and the beautiful surroundings which give it its charming setting would have been sufficient inducement to have incited us to follow our natural inclination to bring our movement into the heart of New England.

What three years ago was a day dream of an individual, two years ago was an experiment on the part of several wide-awake industrial institutions, is today an established institution, having taken its place among the educational systems of our country.

Next year our Association will hold its convention in Pittsburgh (applause) America's greatest industrial city. Pittsburgh, however, won the distinction of entertaining us only after a spirited contest with Buffalo. The well-known modesty of Detroit prevented its becoming an active competitor for our convention next year; but notice has been served on our Executive Committee that Detroit is going to fight and fight hard for the 1917 Convention.

When three cities of the standing of Pittsburgh, Buffalo and Detroit are good-humoredly, but earnestly, contesting for the privilege of spending several thousand dollars to make us welcome and happy, I believe I am justified in stating that The National Association of Corporation School is an institution.

When our Association was in the early stages of formation, we frequently received the following response from those who were asked to join with us as Class "A" members:

> "Yes, it is a great movement, but our particular
> problems are a little different."

Now, we have discovered that the entire movement will readily classify under three divisions.

1. *Health.* What is so important as health, and health can be taught. It is being taught in most of the progressive industrial institutions of our country.

2. What we may call educational guidance for want of a better name, that is, fitting the boy and girl into the right position. This is a tremendous subject, and around it can be grouped promotion, discipline, and most of the other relations between the corporation and its employes.

3. Knowledge. This properly may be divided into (A) general knowledge, or that which is supplied by the public schools and other institutions of learning, and (B) specific knowledge, or that which is supplied by the corporation.

Now although health, vocational guidance and general knowledge are problems of equal importance to every branch of industry, it matters not whether it be a transportation system, a manufacturing plant, or a department store, specific knowledge must be worked out along well defined lines. The knowledge itself may differ materially, but the method of giving it is practically the same.

Thus in opening our Third Annual Convention, I feel justified in declaring our Association an established institution, and one that must be reckoned with by the educational institutions of our country.

In preparing the program for this evening, it seemed fitting that we should have a representative of the municipality, a representative of the commonwealth and a representative of the nation. We did not have to go outside of Massachusetts to get just the talent we wanted. And in addition to that, we have secured a representative of our hosts, who have treated us so royally since we have been guests of your city.

I shall first call upon the Honorable James Logan to speak for the municipality,—Mr. Logan.

ADDRESS

Honorable James Logan, Ex-Mayor of Worcester

Mr. President and ladies and gentlemen, I did not suppose that I was to speak for the municipality, I supposed that I had graduated from that. During four years it fell to my lot here to break the ice at several hundred banquets, to be the first speaker, and to say something for the city, but I supposed I had been graduated and laid upon the shelf for that. Still, I will say if the Apostle Paul were writing about the city of Worcester, he would say, "It was no mean city." (Applause.) And it is a city into which any man or woman might be happy to come and make a home and here raise a family.

Into this goodly city the blood of all the nations of the earth has been poured and is being blended into one, the American without a hyphen, and we hope and expect, increasingly so in the future.

You have come to Worcester for your third annual convention at an opportune time, during the week when we are celebrating the fiftieth anniversary of the birth of a pioneer institution in industrial education which has been in the past, and increasingly so in the future is to be one of the training schools for the education of the line and staff officers of the industrial army of this country. We might properly call this institution an industrial West Point.

The plan of education which has been followed in the Worcester Polytechnic Institute which John Boynton founded has stood the supreme test of efficiency. It has demonstrated its right to a place and a large place in the education of the engineer, and the seal of approval has been placed upon the men who have gone out from this institution into the University of the world of work.

Some years ago when Mr. Carnegie was maturing the plans for his great technical school at Pittsburgh, in order that it might represent the last word in both educational method and equipment, he appointed a commission which visited practically all the leading technical schools of the world and some years later in conversation with a member of that commission, I was told that they found more good ideas that they could use at the Worester Polytechnic Institute than in any other institution visited. And when some years later it was my great pleasure to spend a full day looking over that splendid institution in Pittsburgh I could recognize the earmarks of the Worcester Polytechnic Institute at every turn.

I have been asked to talk to the text—"The Corporation School." In Section I of Article II of the Constitution of your Association, the object of the organization is set forth in these words: "To aid corporations in the education of their employes."

In our thought these Corporation Schools are for the youth so that they may become intelligent, trained workmen, for in the tomorrows that are to be, they are the ones who are to control the life of industry.

But ought there not to be added a second section to this article in the Constitution which would read like this: "To aid corporations in the education of the employers"? I sometimes think employers, owners and managers need education full as much as some of the employes, but education of a different kind.

First, may I be permitted to say a word about the much abused corporation? We often hear men use the expression "the soulless corporation" and too often it has deserved to be called "soulless." One of the burdens of the coming years will be to give a soul to these great organizations of capital which are to be not the masters but the servants of mankind; to give to them souls inspired by righteousness and a spirit of divine service, and it is a part of our business today to help to create that kind of a soul for the corporation, and it is being created.

We are living in an age when business is done on an enormous scale and we think and do business in large units. The individual, the firm, or even the small corporation would be as inadequate to conduct the business of the world today as the old stage coach would be to serve as a means of transportation. We are absolutely dependent on the corporation and the man who invented the first corporation (and it was an epoch making invention) conferred on mankind a blessing second only to the discovery of the power of steam.

Without the corporation the wonderful development of the world would have been impossible. We could not have had the steamship lines which have made the ocean a ferry, by which the products of the world are brought within our reach, and by which the people of the world have been made neighbors.

The great systems of steam and electric railways, the telegraph, the telephone, gas and electric companies and the mammoth industrial organizations have brought the material blessings of this wonderful century within the reach of the masses, and at the same time have furnished employment to the millions so that the means to procure these material blessings have been given to the great family of mankind.

The corporation has been the great storage reservoir in which the small savings of the many have been gathered and then in a mighty stream have been turned into the channels of trade and commerce through which they have flowed forth to develop a world.

By its aid those of small means have had a part in this wonderful development, and without the small savings of the many, progress would have been impossible and we would not have been able to avail ourselves of the creative energy of the great master minds of industry and commerce by which so many of the material blessings, which formerly were not even within the reach of kings, have now become the necessities of the ordinary man.

The nineteenth century will be known to all the centuries of the future as the discoverer of that great elemental, dynamic force, the power of steam. During that century harnessed energy took the place of laborious human toil and relieved the strain on tired human muscles. It gave the workman shorter hours and with the shorter hours he was given some of the daylight which once was not his, for laborious toil demanded all the hours from sun up to sun down. How do I know this to be a fact? Because before I was ten years of age I worked in a woolen mill in a village three miles from where me meet this evening and the working hours were from five o'clock in the morning till seven o'clock at night. Those were the hours men, women and children worked in those good old days of the past, but the best thing about those good old days is that they have gone and gone forever.

With the daylight the workman had a chance to see the world of nature and had some time for reflection. With time for reflection opinions were evolved and those opinions gave birth to the democracy which is leavening the world.

A good many will say the former all-round workman was developed through the old apprentice system, but is that true, and what was the old apprentice system? As a matter of fact, under the old so-called apprentice system, the boy who was apprenticed to learn a trade, got practically no real instruction. He was turned loose in the shop to do a lot of things and one of his principal jobs was to sweep the floor and do things that had nothing to do with teaching him the rudiments of a trade. We speak of the old time, all-round workman, who could do anything and everything, but really does he not belong in the class with the pies that mother used to make in the days when we had a growing boy's appetite?

Let me ask—how was this so-called all-round workman trained? This was before the day of working drawings and blue prints, and the machine grew under the eye of the inventor. In the doing of his work he told each of the men working under him what he was to do, and often showed him how to do it. Having done this piece of work, he brought his part to be fitted into the machine, and, if it was not quite right, he was told to take it back and take another shaving off on the lathe or planer and then bring it back. This was repeated until a fit was secured.

In doing this work the inventor or superintendent very naturally selected his brightest young men to help him and he was working with and coaching these young men all day long—the finest kind of personal instruction. You cannot conceive of anything more ideal, and, as the business grew, very naturally from these young men came the foremen, superintendents, managers and eventually proprietors, but they were not the product of the apprentice system *applied to a boy;* these men were old enough to think; it was a matter of selection of men by the boss, but they were almost never the product of a so-called apprentice system *applied to a boy.*

Some years ago I made quite a study of this proposition and, having developed the theory I have just laid down, I put the proposition up to perhaps twenty-five of Worcester's prominent inventors and mechanics of the past fifty years, and to a man, they agreed with me that I had correctly stated the former conditions. The work of the Corporation School, as I understand it, is to spend time and thought not entirely on boys but on young men old enough to know clearly what they are after in the world of knowledge and skill.

During the sessions of your meetings you have had a large amount of instruction, and any suggestions have been made which will be helpful to you in planning your work for the future. May I turn your thoughts into perhaps a different channel from that in which it may have been running? Most of the problems which men have put up to them for solution are human problems and human nature is of more than 57 varieties. All varieties are usually represented in a shop of any considerable size and to handle the hard and trying situations and decide not only what is *right* but expedient calls for *judgment, patience* and *tact.* There are things which cannot be learned from books, but are burned into men while passing through the crucible of experience.

It is to be expected that managers, superintendents and foremen are to be respected by the men and women under them. Men in positions of responsibility should remember that these men and women will often size them up while they may be quite unconscious of the judgment which is being passed upon them and the sizing up of the average man or woman of intelligence is in the long run fairly accurate.

In order to get the best service from their *help*—and help is the word I like to use, I like that old fashioned word *help* better than the words employe or operative, for they are our helpers—men in positions of responsibility must do their part to make the help like them so that they will willingly work with them and *for* them rather than *against* them.

There is no team work worthy of the name that is inspired by "fear of the boss" and the impelling power of a courteous, likable personality is a great asset to cultivate in management, and an asset which some men throw away. Men in positions of responsibility should cultivate the disposition at all times and under trying conditions, of being *patient,* and above all, *fair,* because they have a larger outlook on life and a wider horizon. They should always try to see the problem from the other person's angle of vision, remembering that it may be a restricted vision; to try never to lose their tempers so that things are said that perhaps never ought to be said, and if said, never said in anger.

In such a school men should be taught to always use care so that never by a hasty act or statement to put themselves in positions where they must back down or take the next step which they do not want or intend to take; to be careful about delivering the ultimatum which will force the step that will precipitate trouble—to always thoughtfully and quietly speak and act.

In most all labor troubles it is just at this point that the serious trouble begins. A manager, superintendent, foreman or workman takes a position from which his pride, not his judgment will not allow him to recede and he must either *surrender* or *fight* while often if reason and tact were used in the early stages of the trouble it would not be necessary to do either. But just a little *temper,* not much, a few *hot words,* not many, and the bridge on which both parties must cross is down. If prior to the trouble a superior's attitude has been overbearing and domineering the help will not have toward this man or the corporation the feelings that make for harmony and industrial peace and he will then harvest the crop from the seed he has been perhaps quite unconsciously planting.

In this school men should be taught never to call down one employe in the presence of another. Words of praise may be said for other ears, but never for other ears the sharp, keen cutting words of criticism which will burn for years, perhaps so long that life is made bitter, and God knows it is bitter enough for some as it is without adding to its bitterness.

If we could only realize and feel the burdens and sorrows that some with whom we are associated carry with a brave, though often with a heavy heart, and without complaint or giving to the world the slightest intimation of the burden, it would soften, sweeten and temper our dealings with those with whom we are associated in business. This is the human side of industry, which too often is crowded out of our thought in these days of larger things. Sharp, keen, cutting criticism, letting go of one's self, humiliates the person spoken to and the leader himself has stepped down to a lower level. When he gets down he often finds it very, very difficult to climb back, and in some cases he can never climb back.

Teach men that they would not like to have anyone speak to them in the same way if the case were reversed. Teach them to remember always that the other man may have just as thin a skin as they have, maybe thinner. The cultivation of a spirit of *grouch* in the boss produces just one kind of fruit. It produces "*after its own kind*," and, as with the law of seed and harvest, the boss can be just one grouch, but from that seed he can grow forty grouches all round the shop and the odds will be against him. Teach men that on the journey through life the man with the *smile* wins every time against the man with the *grouch*. We will grant it will not always be easy to keep sweet and smile, but the trick is to do the hard things. Anyone can do the easy things.

A friend of mine some time ago wrote an article of which he sent me a copy. I will quote from it: "At times a man gets a fool notion that he must be a nasty, cursing, irritating sort of a creature, provided he can pretend to the public that the reason for his general nastiness is the fearful load of responsibility he carries all the week. Then the children crawl under the bed, the cat hikes for the back fence, the dog growls, and the neighbors call their children into the house when they see him coming—there's something wrong even when the man thinks he is making sweet music by rattling the loose change in the shape of five-dollar gold pieces in his pocket. A little gold in one's heart—a little of the milk of human kindness and consideration in one's veins and a little laughter in one's voice, is worth more than a lot of gold in the bank or pocket."

You may have heard what the old railroad superintendent said to his son—it was something like this: "My son, you will sometimes have to discipline men, but you can do that without parting company with good manners. It will not lift you up in the estimation of your men for you to tell a man in the presence of others how many kinds of a d—— fool he is. No, no, that good old word *discipline* comes from the same root as the word *disciple* and the definition of the word *disciple* is a *follower*. Teach them that they need men and women as followers—and they are worthless unless they themselves are *loyal* followers—and teach them that *love* is the impelling power of loyalty.

In Kipling's poem "The 'Eathen" he shows how a sergeant is made in the British Army. The boy comes in as a raw recruit—gets his hard knocks, and comes up through the several grades till he becomes a sergeant, and in one of the verses of this poem Kipling sums up the whole question of *leadership*.

"THE SERGEANT"

" 'E learns to do his watchin'
Without it showin' plain;
'E learns to save a dummy
And shove him straight again;
'E learns to check a ranker
That's buyin' leave to shirk,
An' he learns to make men like him
So they'll learn to like their work."

Having become a sergeant he is more responsible for the discipline and good name of the company than even the commissioned officers. Note the first line:

" 'E learns to do his watchin'
Without it showin' plain"

It is a great trick what to *see* and what *not to see*. To go down through a room in a factory and see everything and yet apparently see nothing. In the second line he says:

" 'E learns to save a dummy
And shove him straight again."

It is a part of leadership to take a boy or a man or woman and, if he is inclined to go wrong, to get off the iron, to "shove him straight again." In the third line he suggests:

" 'E learns to check a ranker
That's buyin' leave to shirk"

and it is quite a trick to see to it that the "smart Alec" does not get by and "put one over on you." You cannot have that if you would maintain your position. But the fourth line gives the point that will make possible all the good to be gotten out of the lessons taught, and that is this:

"An' 'e learns to make men like him
So they'll learn to like their work."

If men want men to work *with* them they must be made to like them and if they like them they will help to make the burden of leadership lighter and the leaders must be taught to remember that one man can do little by himself. If he is to succeed he must have the help of the team and team work or lack of it will make his work a success or failure. Personal influence makes a more lasting impression than personal effort. Effort is assertive, influence is pervasive. It takes possession of men and women and quite unconsciously they are transformed by it.

Mr. Carnegie made a great success but who helped him to do it? Many men of whom the world heard little or nothing, but each did his part. Well might Mr. Carnegie say: "Take away all our factories, our trade, our avenues of transportation, our money, but leave me the organization and in four years I will re-establish myself." But one of the men who laid the foundation of that matchless organization was the lovable Capt. Jones, and the human element of his personality was one of the large factors in the success of the Carnegie companies.

A recent writer in referring to the men who helped make their wonderful success said: "Kelley lived in a world of ideas, Ward in a world of money, Holley in a world of scientific knowledge, and Jones in a world of men." Iron and human nature were his raw material. He put the two together and made steel and money and set the pace for the world, but it was knowing how to handle the human element and make it efficient that made the Carnegie Company lead the world.

When it is necessary to criticize, teach men, do not make it simply a species of fault-finding. That is not teaching. Try to show the person the better, the "more excellent" way. Try to make them see that they are not working for the corporation but for themselves. Show them that it is supervision that costs and that the less they need of supervision, i. e., the more they supervise themselves, the better it will be for both them and the company.

The inefficient workers always pay for the bosses over them. Try to make them see that the corporation does not pay for *an hour of time* but that it pays for what the person *does* in an hour of time. Teach them to say and think "*we*" meaning the corporation and themselves. Teach them that waste costs *money* whether it be of material or *time* and that time is often used as though it was the cheapest thing in the world and yet it is the most costly thing in the world. It is what *life* is made of and we have only so much. We cannot add to it a single second, but men can and men do waste it. Time is the thing we use to measure the value of everything we buy or sell.

The manager of a large industry in discussing the character of railroad men said to an old railroad superintendent: "Why, I need this quality in my factory as much as you need it on your rails. Where can I *find* a thousand of these men?" The old superintendent, with the bluntness of a railroad man, replied: "You can go to the devil but you won't *find* a thousand of these fellows any more than you will *find* one." The manager said: "Then how do you find them—how does the railroad *find* them? and the answer was, "We don't find them; we have to gather the raw material and *make* them to order." And so we must take the raw material and out of it make our own men to order.

Teach men that true efficiency comes from the inside of a man; that it is not superimposed from the outside. The suggestions that come from another man are not worth nearly as much, and it seems to be a trick of human nature to sometimes resent suggestions that come from the outside.

These corporation schools are organized to produce a higher grade of efficiency, and what is efficiency? I think the mechanical definition is the best. "The ratio of useful *work* to energy expended." The finest product of the world is to give direction to and utilize human energy, and our business is to labor to improve both the quantity and the quality of our *work*. Doing that we call efficiency. *Efficiency* is not a thing, it is a *way*. It has neither size nor shape. It is a principle and it can be applied to the making of a pin or the building of a fifty thousand horse power engine. There is nothing miraculous about it. It is simply the application of common sense to ordinary commonplace affairs.

A friend of mine recently attended a meeting on Efficiency and listened to an address by one of the leading apostles of efficiency in this country who has done much splendid work. His talk was on household efficiency, showing how in the matter of even buying lamb chops for breakfast there was a great field for the display of efficiency. The next morning my friend began to teach his wife what he had learned the night before. His wife listened patiently and then said: "Do you love me?" To which he replied, "Certainly I do," and she then said: "Do you love your happy home?" and his answer was, "Sure." She then shot this at him, "Then shut up."

And that is what some of us may feel like saying when we have listened to some efficiency talkers. And some of us who were not born yesterday paraphrase the sign at the railroad crossing and instead of "Stop, look and listen" we say "Look, listen and stop."

Efficiency is shown in small things. Several years ago the general manager of the Pere Marquette Railroad wrought out on a concrete basis and in the simple things connected with his railroad an illustration of efficiency so that every railroad man understood what it meant. He said that for every postage stamp unnecessarily used the railroad had to haul a ton of freight three and one-half miles, for each pencil wasted, two miles; for each track spike lost or thrown away, two miles; for each lamp chimney broken, ten and one-half miles; each station broom, thirty-five miles; each lantern broken or stolen, one hundred miles; each track shovel, ninety miles; each 100 pounds of coal wasted, twenty miles; each gallon of oil, fifty miles. This was a waste expressed in terms of *service,* which railroad men understood, and that kind of teaching is effective.

When employers complain about the inefficiency of their workmen there is one question they ought always to ask themselves, and that is this: "How much have I done to improve the conditions or to increase the efficiency of my workmen, and if all employers had done just as much as I have and no more, where would the standard of efficiency be today?" If he answers that question honestly he will stop complaining and will not blame anybody but himself.

Too long the trend of education has been away from the shop and too few, even of our own people, realize that it is the shop that gave to Worcester its proud place in the commonwealth. To meet the new industrial conditions thinking men have become convinced that there must be an entirely new type both of instruction and *instructors,* if efficiency is to be attained.

To be effective and to render the largest service in the production of efficient men, we must have a shop with a school attachment rather than a school with a shop attachment, where the boys and girls will be taught to run machines by instructors who know how to teach them rather than by instructors who in too many cases are not qualified to give shop instruction even if they do know the difference between a lathe and a drill, who are not in sympathy with shop atmosphere, and who (shall I say it?) look down on the shop rather than up to it. To do the work of today such an institution must be a real shop, permeated with the atmosphere of work and business. The corporation school must be more like our Trade School that you have an opportunity to visit, and the cost connected with all this instruction must be treated as an overhead charge against the costs of production in each particular line of industry.

The object of this new instruction must be to train the youth, both boys and girls, to *work* and to work intelligently. We must never lose sight of the fact that bread, clothing and shelter constitute the main *business* for the great mass of mankind. To earn a living,—and it matters not how much culture a man has,—if he cannot earn a living he is practically worthless both to himself and to society.

The ordinary foreman cannot or will not stop his work to explain this or that to the ordinary boy. He cannot, his mind is taken up with other things. The exceptional boy will not need much from the foreman, he will get most of it, as electricians would say, by induction, but there are not enough of the exceptional boys to go round and we must depend upon the development of the ordinary boy. Besides, teaching is an art and it is not possessed by everyone; not everyone is a teacher.

In these days of so-called (and often miscalled) scientific management there is a tendency by some to ignore the human element in industry—to create human industrial machines for the production of goods at maximum speed and minimum cost without giving sufficient thought to the human side of the problem. There is a mechanical spirit abroad in the world which unless leavened will produce mechanical qualities of mind which will have a tendency to wither the ordinary human feelings.

If the only motive behind the corporation school is to produce an automatic human unit capable of producing a lower unit cost of production, with no thought or with little thought of the human side of the problem, then its work will be a failure. Too long the human element in both politics and industry has been neglected. Men must care more for men and less for money.

If an education is to be used simply to increase a man's ability to get hold of more of the material things of earth which perish with the using, if it means only larger capacity for shrewder scheming in order that men may take from others and with the muck rake get together a larger pile for themselves (unmindful of the methods employed to get that larger pile) and with no voice of conscience to remind them that "life consisteth not in the abundance of things that a man possesseth," it will be a failure. A man should always remember that, among the many things that money cannot buy, two stand out very clearly, the forgiveness of Heaven and the respect of the earth. If the intellect is trained, if the wits are sharpened, and the development of the moral and spiritual element is neglected in men, we do violence to those higher things which make for the larger growth.

The hope of the future, and the only hope, lies with men who are possessed of *spiritual* ideals, who see in their toil something larger than the dollar. Money has its place in our social organization but simply the making of money must not be the end and aim of life. Money can make possible the doing of wonderful things. It can feed the bodies of men. It can be made to minister to the needs of humanity but neither a dollar or a million dollars ever fed a human soul, for souls grow only as the higher life has always grown—by service to one's fellowmen. The seed sown two thousand years ago, like electricity, has been in the world all these years but men have not laid hold upon it. Here and there one of the finer minds of earth tuned to a higher key has caught it, but now it is in the air and it makes little difference where you look in the literature of today, in philosophy, theology, economics, or fiction, in the confusion of sounds one clear note is being struck and that note is *Service*.

The liberties we enjoy, the food we eat, the clothes we wear, the houses in which we live are ours because of the service of countless thousands of our fellowmen, and shall we not render an equivalent in return? As a man's possessions grow, his debt to humanity increases in proportion, and this debt to humanity he can never wholly liquidate. All he can hope to do is to make a partial payment on account.

Many a man bends all his energies to make money, often with the thought that he may do good with it, never realizing that the same energy devoted to helping his fellowmen would accomplish more good for them and leave him, at the end, a better man. Too often in the process of accumulating his fortune by the change in his style of living, he unconsciously separates himself from human interests and needs so that his life becomes hard and unfruitful. When he has accumulated his fortune, he has lost the *common touch* with the less fortunate and needy of earth, which would have sweetened, purified and sanctified his life, and which he needed much more than they needed him. The very comforts of life which have come to him have been the means of deadening his heart to what ought to have been the mainspring of his life—the remembrance of his debt to humanity which made possible his accumulation, a debt which cannot be discharged by drawing a check, a debt that can only be paid by the coin in which humanity's debts are always paid, the divine coin of service. As it has been well and truly said: "If Jacob Riis had put off helping the poor of New York until he had made enough money to *hire* someone else to do it, he would have accomplished very little, but he chose the better part." He gave himself and that is what we need today, more giving of self, to coin a little less of life into cash and stocks and bonds, land, pleasure, luxury and ease, and a little more into the divine service of helping one's fellowmen. As another has truly said: "Not what you tried to *save* but what you gladly *gave* will be your only wealth when the last days come. When eyes close upon the scenes of earth, then men sometimes appreciate the great paradox of life—that we keep that only which we did not try to keep—that the secret of holding in death, as in life, is in letting go."

These corporation schools can have a part in doing this work and if well done the value of their work cannot be measured by the standard of the dollar, but in the larger life of man and the conditions under which he is to live and work. It is worth while to be a private, corporal, sergeant, captain or general in such an industrial army.

THE TOASTMASTER: After several months of effort, there was a belief on the part of the organization committee that we should sound industry to see whether or not there really existed a field for the corporation school. A conference was called in New York City in one of the school rooms of New York University which Chancellor Brown had kindly offered us, and just as we were gathered there—not many of us—there came into our midst a man who is the final authority on all subjects electrical, a man who had left his work to come to our meeting because there was in his heart sufficient love for all humanity. He worked earnestly in our behalf and because of this sincere interest he was elected first, vice-president and later president. It is the pleasure of this assembly this evening to listen to him speak as President although we regret that it is his farewell address to us in that capacity. This does not indicate any slacking of interest on his part in the work we are trying to do, the work that the previous speaker so beautifully impressed upon us.

It is now my privilege to present to you the greatest living scientist, Dr. Steinmetz.

ADDRESS

Dr. Charles P. Steinmetz

Ladies and gentlemen, with tomorrow morning's session, the third Annual Convention of The National Association of Corporation Schools, and with it, my presidency, passes into history. We have had a very successful convention and a very successful year. In spite of the great handicap of the industrial depression brought about by the war, we have greatly extended our activities during the last year, and have been able to do considerable work within this year and within this convention, and we are sure that still greater work will be accomplished in the next year, under our incoming president.

This year's convention closes what I might call the first period of The National Association of Corporation Schools. We have succeeded better than we anticipated at the charter meeting, and feel confident that this organization now has taken a legitimate place in the field of human activity, and is a permanent organization dealing with educational activities of modern industrial corporations.

We have laid a foundation of a mass of collected facts, and now are ready to begin constructive work, on the foundation laid in the last years. Not that our data are as complete and extensive as we would like to see, but we shall continue to gather data and construct from them, and we hope to greatly extend our activities. So far all the work has been done by men high in the councils of their corporations whose time is limited, and who yet have freely given of their valuable time in the study of the human relations of corporations. They have gathered information by questionaires addressed to all organizations where information could be secured; but we all realize that to secure this information, and to give the information, requires more time than can be given by these men. The necessity now before us is to extend this activity by a paid organizer assisting the voluntary efforts of the members gathering and correlating data, drawing conclusions from it, and so erecting a structure which will afford the corporation the material which is so much needed in dealing with the human elements of the corporation, from the unskilled laborer and office boy to the president and manager, so as to make the corporation what it should be.

I do not quite agree with the statement of the last speaker that the corporation should not be the master, but should be the servant of mankind. I look forward to the time when the corporation will be mankind, those times when all mankind will form a co-operative industrial organization which in its initial crude form is represented by the modern corporation. The purpose of our organization is to speed that day by completing the activities of the corporation, by further investigating and extending that part of the corporate activity which has last been developed, which deals with the human relations between the employes and employers, between the structural elements of the corporation which are human beings. Such human relations are necessary to secure the efficiency of the corporation, which finally will be the efficiency of mankind; to secure co-operation.

But let us realize what efficiency is. Efficiency is the relation of the useful work to the energy expended in accomplishing it. Efficiency has been measured by physicians by observing the chemical fuel value of the food, and the mechanical work done, and so getting the efficiency of the human being as a heat engine. That is one kind of efficiency.

Then, there are those who measure efficiency as industrial efficiency, as the relation of the amount of commodities produced, to the amount of material and money expended in producing them. This is the efficiency of man as a cog in the industrial machine, but not his efficiency as a human being. What then, in our purpose, is efficiency? It is to make the most of our lives, and our industrial productivity is but a part of a means to that end, although it is not the end. We cannot call a life efficient that is not producing; but there are many people of high industrial efficiency amongst the working men as well as amongst those men who are called very successful, millionaires and multi-millionaires, who are really leading very inefficient lives, because they get nothing out of life that is worth anything. Industrial efficiency is necessary to secure human efficiency, but it is not human efficiency. This we have to realize, as it often is the principal stumbling block in the co-operation between the educator of the public school system, who usually holds the broad view of human efficiency, and the narrow view of many corporation men, who cannot see beyond industrial efficiency, and therefore claim that public school education is inefficient because the pupils learn nothing by which they can immediately earn their living as part of the industrial machinery. We must realize this, as mankind will not go very far, unless we have a clear view of what true human efficiency is.

This has been the keynote of our organization from the very first meeting, and we are endeavoring to impress it upon the corporations, that the success and the existence of the industrial corporation is dependent on the efficient co-operative relation between all elements of the corporation from unskilled labor, from the office boy, up to the general manager and president; that this relation is a human relation and must be collectively established because it does not exist by itself, and that these activities must be taken care of as a new departure of the corporate idea which has not been cultivated to any extent in former times, and the neglect of it has been the cause of most of the opposition to the corporations that have been dealing with labor as commodity, and not with labor as being given by human beings. It is the human relations and more particularly the educational activities of the corporations which are the specific subject matter of our association, as these human relations must be established between all structural elements of the industrial corporation, before it sociologically can earn the right of existence. It must earn the right of existence, because modern industry and modern civilization requires a more efficient tool than the individualistic production of the bygone age; it requires the cooperate organization of the industrial corporation as the necessary step towards the advance of civilization, but to make this possible the corporation must deal with all of the activities, not only administrative, financial and productive, but also the human relation of its structural elements. (Applause).

THE TOASTMASTER: The position of toastmaster is one in which I have had no experience, but my mind turns to the story told by Mr. Larkin when he felt that there were shortcomings in the report of the committee of which he was chairman, and to express his feeling so that the audience would understand him he told the story of a young fellow who was being married. There was a large gathering at the ceremony and everyone was calling, "Speech, speech." With considerable embarrassment the bridegroom rose, put his hand on the shoulder of his bride and said, "Really, I don't know what to say, this job was wished on me." (Laughter).

Now the next speaker I had never met until last evening, but my desire to meet him was rather strong. In a party that had been arranged for a very delightful automobile trip was my wife and upon her return from the drive she said to me, "Oh, I met the dearest man today!" Then another woman who I discovered was also of the party said, "Oh, isn't he a dear!" Well, I began to feel better since it seemed to be a unanimous feeling and so I asked to be introduced to the gentleman. He is the next speaker on the program—Mr. Norton.

ADDRESS

MR. CHARLES H. NORTON

Mr. Toastmaster, ladies and gentlemen of The National Association of Corporation Schools, I deem it an honor and a pleasure to be permitted to look into the faces of so many men who represent the great industries of a great nation. The men who produce our necessities, our comforts and our luxuries:

"The men who plan things,
  Build things, make things;
Who boast not of knowledge old,
  Nor rest upon ancestral gold,
But take off their coats and
  Take a hold and do things."

The prosperity of all, high and low, educated and uneducated, depends upon the prosperity of our industries; and the problem that confronts industrialists today is to educate the educated, the intelligent and the successful that they may realize that if we are to increase our industrial efficiency and hold our place in the world's work, if we are to have industrial peace upon which all education and success depends, we must use the larger part of our public schools for industrial education, under the direction of those who understand industry.

When we realize what was accomplished by our early industry, when both workmen and employer were without "school education," when they worked out their problems away into the night and shaped up the product the next day, products that gave New England its early reputation, we can imagine what the industry of the future may be when every workman goes about his work armed with an education that fits his needs, and with the satisfaction that he is educated as well as the preacher, the lawyer and the president.

We must not flatter ourselves that because we once held a high place in the world of industry that we can always lead as an industrial nation if we do not educate our workers for their work. They have done nobly in years gone by; they have served us well while we were giving our entire time and effort to the education of others, and they were picking up their education for their life's work as best they could.

Our early workers were men who had grown up under the influence of the New England town meeting; an environment very different than that which has given the life bent to the workers of today, even though they were born among us. That New England environment was an education that fitted the needs of the industries of the time, but I believe it is generally conceded by employers in the industries of today, that the present day education and environment judging from its product not only does not fit the industry of the time but does not inspire any very overpowering desire for industry.

When our industries began the needs and demands of the world were very modest in comparison with what they are now, and efficiency could therefore be less. The time is close at hand, if it is not already here, when intelligence and efficiency must be greater, or we will lose our place in the world's work, and suffer continually from industrial wars. There is nothing that so thoroughly sets men at peace with the community as to increase their intelligence and efficiency.

For a nation that has the reputation of educating the masses, we have sadly neglected them in that we have not educated the masses for industry, but have given our best talent and our time to education for the professions, general knowledge and culture. By neglecting industrial education we have allowed our industries to lag behind in our social procession, until captains of industry now find their problems very difficult, and society is disturbed.

Society is disturbed because a part is considered as "engaging in business," while another, or the larger part, is considered as working; a part has "taken up a profession," and that other part has been given work; a part has left school and "accepted a position," and that other part has found jobs.

When all shall understand that all successful effort is work, and not be ashamed of work; when education shall mean work in our industries, as well as work in our professions and our commercial offices, and when we have an education adapted to our industries, as it is now to our professions, there will grow up a respect for all educated men in all lines of effort, and what is most important there will follow a greater capacity for earning money—the greatest factor in our social balance. There is nothing that will set a man right with his fellow-men like prosperity, and there is nothing that will give him the capacity for prosperity like education for his own life work. Education of a general character has never and cannot now serve the vast army of industry.

One speaks of "keeping very busy;" another says he is working hard; another says he "toils from morning till night;" another says he is "slaving his life away." They are all doing just what they say they are doing, and all because of the point of view fixed by their knowledge or lack of knowledge of their work, and their capacity. The man who has education that fits his needs says he is "busy," because that education gives him the intelligence to understand his true relation in the world, and he becomes happy in striving to rise. This illustrates the necessity of education, adapted to the needs of all, and not simply for a part, no matter how important that part may be.

I have a friend who is successful in one of the professions, educated in the first university of the land—a man for whom I have the greatest respect—but I suspect that should he be obliged to go into one of our Worcester shops and produce enough to pay his board for a year, he would say he was "toiling like a slave." Why? Because he would be ignorant, and before the year had passed away he would probably be discharged as inefficient. He has education and culture but his culture will not prevent him from being ignorant if placed where he must earn his living at something for which he was not educated. He was educated for his life work, while at the same time thousands were going through our schools, who innocently believed that if they passed and graduated they could be fitted for their life work—a belief that has spelled surprise and disappointment for thousands of boys when they entered our industries.

Such of those as were naturally intelligent and of strong character have realized that their real education for the work of life must begin early in their school career, while those with less strength of character and whose parents did not understand, have drifted into that vast army of industrial misfits who would now "investigate" those men, who, struggling up from humble beginnings, with hours of labor that knew no clock, have built up the industries that pay higher wages than in any other country in the world—industries that have given opportunities for all to rise by honest effort, no matter how humble their origin, as never before in the world's history.

Some one has said recently that "we are about to take up a new science—the science of men." The science of men should be included in the curriculum of the modern industrial school. Ignorance of men, and ignorance of the simple laws of common justice is preventing men of all grades in industry from succeeding, and is causing continual social disturbance. No matter how much a graduate of our schools may learn of language, mathematics or dynamics, if he is ignorant of the science of men and the common laws of industry he will consider his first job after graduation as beneath him, his employers as unappreciative, and he will seek a "position" until he learns by experience that there are no "positions," but that there are thousands of jobs waiting for men who are strong enough and can work hard enough to hold them down.

Professor Sweet, that grand old man of Syracuse, workman and engineer, from whose writings some of us have learned more than from any other source, said: "I respect the man who knows what has been done and who did it, but I love the man who knows what to do and does it."

Industry is calling for men who know not only what has been done and who did it, but men who also can teach what to do and how to do it. It is reaching out its arms for the sympathy and help of our educated and successful class, that they may help to teach the laws of industry. Industry: upon which all classes depend for their very existence.

The field of industrial education is as wide as any other field of learning now known, and demands all of the talent and strength of our nation. It is not simply a matter of mathematics, drawing and dynamics, but, what is more important, it must teach men by systematic and scientific methods that all successful endeavor is work, whether it be in the lawyer's office, the factory or in the preacher's study, and that while some are lazy and rich, they can be so only because someone else—possibly father—has worked hard and given the results of his labor to them that they may parcel it out to others who are earning it again.

All schools should teach that "no one can succeed through education and talent alone—that they are valuable allies, but are dangerous when they usurp the place of solid labor." We must teach that there will always be work to do, that no amount of education and culture in a nation can reduce the necessity for work; that there must always be just so much work done to support the people of our country; that there is but one way to lessen human labor, and that is by labor saving machinery and devices—that labor saving machinery is the cause of our being better paid for our industry than the ancients; that labor saving machinery and devices are the cause of our better homes, better conveniences and everything we call modern.

From some writings in our magazines and the public utterances of some men who are considered to be intelligent, I suspect that this fact is not understood by the public, or even by many educated men. This truth should be taught in every institution of learning in the land,—that fifty years ago when persecution of inventors had ceased, we entered upon an era of improvement, of higher wages for workers, better clothing for all, greater comforts, better and more luxurious homes for all; an era of music and art enjoyed by all as never before; an era of fifty years, that for uplift of the human family surpasses any two thousand years before.

There is a great work before the men of education in America. It rests upon them to work out the plans by which industrial education may help to raise this country to first place in the world of industry; to restore it to a country of industrial peace, where we have not only the few who have been taught what has been done and who did it, but also the great majority who have been taught what to do and how to do it. (Applause).

THE TOASTMASTER: The next speaker of the evening is another man who came into our movement as a charter member and who has rapidly advanced to leadership, Dr. Herbert J. Tily of Philadelphia.

ADDRESS

MR. HERBERT J. TILY

Mr. Toastmaster, ladies and gentlemen of The National Association of Corporation Schools and our good friends of Worcester who have so delightfully entertained us, although we are glad we are going to Pittsburg next year, we cannot help but feel at this time that we are sorry that we are not again coming to Worcester.

I was cheeky enough to bring two-thirds of my family with me, and the total number is six. I have had them with me on other excursions, they have been with me to many of the capitals of Europe, and I have it from them, that never in their lives have they had a better time than they have had here. (Applause.) And I wish to tell you ladies and gentlemen and our hosts here how very grateful I am.

The Toastmaster was good enough to give me a title which sometimes I am ashamed of. I am a doctor of music. (Laughter.) Of course, you are business men, and this raises the suspicion in your minds as to whether I am a bad musician or a bad business man. (Laughter.) But it gives me a starting point. That is the reason I asked Mr. Henderschott to introduce me as "doctor." I have been looking for an inspiration. I recall that some years ago when I was asked to give my first organ recital, in a very hopeful moment, I put down as the piece de resistance Bach's G Minor Fugue. I was never more scared in my life than when I faced that well known instrument which I had played so many, many times, and realized it was up to me to "put over" this wonderful, classical, beautiful work in the proper way. I got through it some way, and I was told afterwards by a musical friend whose knowledge of Bach was as good as mine, but who was not under the strain I was under of producing his masterpiece, that I had given a most delightful improvisation on Bach's theme.

I was asked yesterday by Mr. Dunbar to give him an outline of what I might say this evening, and in another hopeful moment I outlined what I thought very likely would be my oration this evening. I find now I am going to improvise again, and in fact I have known all day that I could not follow that outline.

I have asked one or two of my friends here—and I have many friends among the members of this Association—for an inspiration. I asked Mr. Howlett a few moments ago, but he told me to tell you some stories. I recall that one of my friends about a week ago told me a story of his experience. He came home one evening and was told by his wife that a number of his friends—his real friends—were coming for dinner. He said, "My dear, have you put away the umbrellas?" She said, "No, what is the matter, are you afraid of their being stolen?" "No," he said, "I am afraid of their being recognized." (Laughter.) I hestitate to tell stories here tonight for the same reason.

I wished today I had one of those 42 centimeter guns that are doing such terrible work on the other side. I recall there were three darkies who were once discussing how far those guns would shoot, and one darky said, "Why, man alive, they tell me that there gun will carry about twenty tons for about five miles." The second darky said, "Five miles? Why, niggah, not five miles, but fifty miles." The third one says, "Boaf of you niggahs are wrong. All that gun needs is just youh address, that's all, and it'll git yo." (Laughter).

I have been looking for help and inspiration, and I have found them all here. I have found that the rather selfish atmosphere which has been present at all the business meetings of the convention has passed, and that we are now talking of our joy in our work, the by-product of education, the altruistic side of it; that we can now, without fear of being laughed at, consider the worker not as an apprentice, not as a machine operator, not as an office man, but as a son or a daughter with a definite relation to the mother and the father; of a man as a husband with a definite relation to a wife, and that we can speak of the joy we have—because it is a distinct joy—when as the result of our educational work, we are able to send for a boy and say to him, "You have developed well in our establishment, and your salary from this time on will be so much more." To look in that boy's eyes, which anticipate, and through which we can see the delight in his mother's heart when he takes the news home, that is worth something to us. And I am glad I am here simply to tell you this now, without fear that you are going to say that is of no use to you; that it will not help you in the problems that you came to Worcester to have solved. Now we have this joy, and we can give voice to it, and our fellow member is not ashamed to acknowledge it *here,* if he was in the convention. Here he glories in the fact that whenever he does anything which uplifts his people, and which increases their earning power, he is sending a happy father, a happy son, a happy daughter home to a happy mother, sister, brother or wife. Now this is a by-product of this more or less selfish work which we are doing. This, by the way, is the definition, is the explanation of the human element that has been so ably spoken of here this evening. And there is one other, and that is that we are making better citizens. The day of reckoning is here. We must reckon with our people's power as voters, as inspirers of legislation. If they know that we take a real joy in our work to help them earn more, to increase the comforts of their home, to enlarge their whole vision of life; seeing that we are doing more and more for them, they will not be a menace as voters, and they will not be a menace as inspirers of legislation.

This is rather a poor improvisation, ladies and gentlemen, on the outline which I gave Mr. Dunbar, but I am quite sure it finds an echo in the hearts of all of you who are here present. (Applause.)

THE TOASTMASTER: I first learned of Boston as a city of culture, and a little later I learned that that distinction belonged to all of Massachusetts. Naturally in selecting our speakers for the evening we cast about to see if it would be possible to have a leading educator of Massachusetts to make one of the addresses. We are fortunate in having with us an educator, one of the foremost not only in this State but in the whole United States—Dr. Snedden. (Applause.)

ADDRESS

Dr. David Snedden, Commissioner of Education for Massachusetts

Mr. Toastmaster, ladies and gentlemen, I am very well satisfied that when the historian of the future comes to deal with the educational movements of the first decades of the present century, the outstanding development that he will have to record will be that of what we today call comprehensively "Vocational Education."

Some ten years ago Massachusetts became very much interested in the promotion of vocational education through and by means of some special forms of public school. It was a citizen of Worcester, since passed away, who in many ways took the preliminary steps in this direction.

A special commission was created looking to the establishment of what we then called industrial schools. That commission has since been merged with the State Board of Education, whose servant I am. We have been continuing in a rather quiet way, and with the aid of State money and local initiative, to promote what we call vocational education through and by means of public schools.

Dr. Steinmetz has spoken very ably of the co-operation that more and more is a condition of development of the future. I wish to say just a few words tonight along the line of intelligent co-operation between the efforts that you represent and the efforts that are going to be put forth not only by Massachusetts but by many other States in the Union along the lines of vocational education. It is absolutely essential if we are going to have this co-operation that we should actually understand each other's positions, as well as the demands that we are trying to respond to and the procedures or methods that we are employing. It is absolutely necessary, too, that we should always define for ourselves what we mean by this or that form of education.

A great deal of the discussion that I have heard here today, and a great deal more discussion that you would hear in a gathering of public school men is in a way due to the fact that we have, not yet adequately defined our ideas of what we mean by particular forms of education.

It seems to me that we are now entering upon a period when we can well afford clearly to analyze the meanings of education. The use of the singular word "education" is a dangerous one, both to clearness of discussion and to clarity of thinking. It is coming to be very much more advisable that we should learn to speak of "educations," in the plural; that we should realize that there are many questions, aims and ends to be subserved by education, and that one type of education will accomplish one purpose and another type with other agencies, still another and perhaps very different purpose.

It is quite common, for example, for business men to complain about the inefficiency of the public schools because of the unfitness of the college graduate or the high school graduate or the elementary school graduate to enter his shop and to become a top notch mechanic. I have often wondered why it is that they send men anywhere but to the plants to learn the things that they have to teach there when they know that the public school, the high school or the college never undertakes to do that job; that is, it has never been a part of its purpose. We must realize that what we call the field of human employment represents in reality a multiplicity of distinct employments, and a constantly increasing diversity of employments, whereas the work that has hitherto been laid upon the public school has been to achieve those ends with reference to which we all have something in common and as to which we are all more or less in close relationship.

When in the public school we try to teach American history, we are not trying to teach Americans by that means to become civil engineers or farmers or machinists or any of the other workers who do the world's specialized work. We are trying to teach American history to every one of those people in order to make them American citizens, appreciative of their country, its history and its present status.

When we try to teach something of English literature in our public schools, we have in mind as a rule not the dentist, nor the lawyer, nor the bookkeeper, nor the carpenter, nor the teamster, but we are trying to impart the common cultural elements that in a sense belong to all of these men, as a part of their common inheritance.

But the first decade of the twentieth century has given to those of us who are connected with public education a new set of demands, the first hints of which were heard in the closing years of the nineteenth century. These demands are for the creation of special schools wherein young people can be trained in vocations.

We have long had schools in this country for the training of lawyers and doctors and for spreading the knowledge of music, which schools had no connection with our public schools. We had also established national schools for the training of our military and naval leaders many and many years ago.

Massachusetts began twenty years ago to offer to her people something in the way of vocational teaching in the public schools. The entering wedge, or the first step along this line of education was the giving of National aid and State aid to agricultural schools or colleges. Publicly supported education in mechanical engineering was another step in the same direction. Our achievement here in Massachusetts in vocational school work is simply an extension downward and outward so as to reach the point where there will be offered to young people many opportunities for some vocational education. We come then to the conclusion that underlying this policy in Massachusetts was this question: Why should not we give directly to the boy who will find his best vocational opportunity in being a carpenter a qualifying education through a vocational school as useful as we now give to the civil engineer, or the lawyer, or the doctor, or the dentist, or the farmer, or the follower of any one of the multiplicity of other vocations that we now teach? It has been a question that has been up for discussion a great many times, so we cannot believe or consider here that it is new. The cities have made a beginning by having their commercial schools where they train for various vocations, such as that of stenographer and bookkeeper and this would be but extending simply a step forward.

Now to my mind there are several problems involved in this that might be discussed very adequately within the near future with regard to the respective values of public and private efforts in vocational education. There is not the slightest doubt in mind that the cities of this nation are going forward in the movement for vocational education.

When sufficient time shall have elapsed to enable our successors to write the history of education during the first two decades of the twentieth century, it is a safe prediction that the chief outstanding new development to be recorded will be that of vocational education for the rank and file of workers. Our historian will note that while at first some writers and speakers hailed the movement for vocational education as something new and wonderful, it gradually became evident to the thoughtful that it was in reality only a great revival of an ancient institution which had been somewhat neglected because of changed conditions. The proposal that training for occupations should be effected in part through schools seemed at first novel, until it was recalled that society had long ago established schools for the systematic vocational education of physicians, priests, lawyers, military leaders, and teachers, and had later also fostered schools, public or private, for those seeking to qualify in skill and knowledge for the vocations of dentist, stenographer, engineer, navigator, agriculturist, and architect. The success of these special schools had in time caused systematic apprenticeship as a means of training for most of the so-called professional, and some of the commercial, vocations to disappear.

But in many of the occupational fields for which vocational schools had not been established, it was found that the historic forms of apprenticeship training were steadily declining in effectiveness. The substitution of machine for manual processes of production, the increasing mobility of labor, the fiercer competition of individual units of industry over larger areas even of international extent, and the increasing availability of technical knowledge as a basis for effective production in such callings as those of gardener, cook, salesman, electrical worker,—these factors, among others, have contributed to the relative decline of apprenticeship as a means of effective vocational training. As this fact became more widely recognized, private and public effort was gradually enlisted in movements either to restore, under modified forms, the agencies of vocational education which had proved effective in the past, or to develop new agencies for such training. We who are at work today are living in the midst of such movements.

But our historian would be incompetent for his task if he did not also see in these movements evidence, on the one hand. of a more developed, or even new, social conscience, and, on the other, a growing consciousness of the larger possibilities of man's control of natural and social forces through increasingly definite training of all youth towards individual efficiency. The world is becoming ever more populous, with a resulting heavier draft upon its natural wealth. Men's wants are becoming always more extensive and varied. If our increasing numbers are to have what they want, they can procure it only through greater inventiveness, greater skill, greater availability of capitalized instruments of production, and more effective organization. These are the indispensable requirements not only of the greater production of wheat, coal and iron from the earth, but of those other forms of real productive activity such as healing, teaching, governing, trading, and manufacture.

Hence the well-being of each individual becomes obviously dependent upon his having opportunity, and, if that be not utilized, of being obliged to equip himself to do his share of the world's work well. Neither in war nor in industry can soldier or officer save even himself if he have no skill and useful knowledge. If the youth finds nowhere opportunity to be trained in such skill or instructed in such knowledge, the fault obviously lies largely with all of us as we constitute society. We can easily perceive, too, that the well-being, not alone of any individual but of all society, is involved. The efficiency of any social group depends much upon the individual efficiency of its members.

The experience of the last few years has served to reveal to us certain of the essential principles which cannot henceforth be disregarded in any consideration of vocational education, among which are these:

One.—It is necessary and expedient that society shall assure for each youth, as a part of the social inheritance to which he is entitled (and which may well be called a properly protected childhood and a fair start in life), not only fair opportunities for a so-called "general" or "liberal" education, but also opportunities for an effective education towards the exercise of some special vocation wherein he can do well his share of the world's work.

In greater or less degree, and often most imperfectly, society has done this throughout the entire historic period.

Two.—As correlative to the above, where an individual youth, owing to personal limitations or an indifferent home environment, fails to profit from existing opportunities, then society must, as it now forces him to learn to read and write, also compel him to acquire a minimum degree of proficiency in some occupation.

Three.—The province of the state (using that term to include the nation, the State as found in America, and the municipality, or other political unit) in vocational education is to insure that effective opportunities for the right kind of training, and in sufficient number and variety, shall be available. The extent to which the State shall support, administer, or supervise vocational education must be determined solely with reference to the competency of other existing agencies. Where the efforts of the individual and his family are adequate to guarantee effective opportunities, neither the State nor organized economic agencies need feel responsibility. Where organized economic agencies such as the industries, agriculture, commerce, and also the home and the professions, are equal to the task of recruiting their service with properly trained workers, then the State has no immediate obligation. Where, however, organized economic agencies and the home seem to be quite unequal to the task of providing adequate vocational education, then the State must create opportunities and, if necessary, support, supervise and administer their activities. This is the lesson not only of history but of a sound social philosophy.

Four.—It is certain that modern development in commerce, agriculture, the industries, and even in the home, arising in part from the application of science, the results of invention and the larger use of capital, have progressively diminished the relative capacity of these economic agencies, themselves, to give good vocational education as a by-product of their productive work. In what fields of men's work and to what extent this is true is still a matter of inquiry. In the professions, apprenticeship as a means of vocational training has almost disappeared.

Five.—Where a field of service has been measurably freed from the conditions of competition among its various units, either because it has become a part of public service or because of the co-operative organization of its various units, the maintenance of effective private vocational schools in such service is feasible. The education of lawyers and physicians in Great Britain is an example of one kind, while the education of telephone operatives in America may be looked upon as an example of the other. In effect, also, vocational schools for the training of public school teachers and military leaders may be regarded as examples of the first, while certain American schools for printing, machine shop work and railroad service may be properly regarded as examples of the second.

Six.—Where the employing units in a given field of work are in active and direct competition with each other, and especially where such units are comparatively small, it is certain that modern conditions as to the mobility of labor, the restrictions on legal power to contract for future personal services, and other conditions render it exceedingly doubtful whether privately maintained vocational schools in such fields are practicable. In that event the State, itself, may be the only effective agency for the direction and support of vocational education.

Seven.—In many fields of vocational education a division of active effort between State agencies, on the one hand, and private agencies, on the other, will undoubtedly prove most feasible. For example, in State schools a period of introductory training might be given, after which, under conditions of controlled apprenticeship with evening or continuation school attendance, further training might be given in the industries, themselves, as a by-product, to a degree of productive activity. It is essential in any plan of this sort that the entire scheme of vocational training shall be clearly elaborated, in order that the respective responsibilities and possible accomplishments of the public and of the private agencies shall be determined and enforced.

Eight.—It is clear that, under existing conditions and in view of the present prevailing educational traditions, the greatest danger to be encountered on the part of State-supported vocational education is that of expending public money ineffectively. Educators as such are very unclear as to right standards of vocational education. Many of the efforts in which they are now engaged, or which they will hereafter inaugurate, will result only in unsubstantial and impractical training, ill adapted to modern economic conditions. Every administrative agency charged with expending public money for vocational education should, in the fullest possible measure, enlist the co-operation of practical men who have had much experience in productive work under existing conditions.

Nine.—It is also clear that where vocational education is undertaken by existing private economic agencies the greatest danger to be encountered will be that of subordinating the permanent well-being of the individual, and as a consequence, also, the welfare of society, to the immediate interests of the employer or the private school director. It is doubtful as to how far the State can permit a "laissez faire" policy to prevail here. The temptation towards what is sometimes called, invidiously, the exploitation of young workers and of the followers of highly specialized vocations certainly exists, and often can hardly be resisted under modern competitive conditions in productive work, especially manufacture and commerce.

Ten.—On the purely educational side, it is now clear that effective vocational education for almost all occupations involves three very distinct aspects, namely:

(a) Practical training towards skill and concrete experience;

(b) Technical training in art and science as applied in the occupation; and

(c) General vocational training in the civic, hygienic, economic, and historical aspects of the vocation for which training is being given.

It is sometimes assumed by superficial thinkers that the last two phases of this training can be given previous to the first, but experience now conclusively supports the contention that, for the large majority of occupations, training along practical lines towards skill and concrete experience is an essential preliminary to successful work in the other two places. Phases (b) and (c) are more readily adapted to school conditions. State schools, because of necessary restrictions as to their entry on economic undertakings, find it difficult to provide sufficient means for phase (a). Nevertheless, the conclusion is inescapable that sound vocational education, whether conducted in State schools or privately, must provide for all three phases concurrently. Here, again, the probable practical program for many lines of vocational education eventually will be co-operation between

State schools and private economic agencies, the State school taking largest responsibilities at the outset and exercising a measure of supervision throughout the entire course of training, but private agencies offering their resources, without cost to themselves, as a means of completing a program of vocational training.

Eleven.—The State must not assume that economic agencies whose primary object is production shall be expected to undertake vocational education under conditions which will entail a financial loss. These economic agencies must find themselves compensated for their educational work, either in the day to day product of the learner over and above the actual cost of his education, or in the available power of the worker after he shall have had his training. Compensation of the latter kind, in the absence of any system of indenture, can only be assured when the various units of an industry are organized co-operatively so that the burden of training falls upon all rather than upon certain individual units volunteering their educational efforts. Compensation of the first sort can often be arranged for by adjusting the wage rate of the learner slightly below the cost of his education, due allowance being made for the necessity of shifting the worker, as a part of his education, from one operation to another, and the probability that in all departments of work his initial product will be crude.

Twelve.—The existence of a vocational school or other opportunity for vocational education must be always thought of, primarily, simply as an opening. So far as the large majority of our young people are concerned, they will elect, with the advice of parents and others, the particular vocational schools which they will attend, as they now elect among medical, law, commercial, and engineering schools. The notion that seems sometimes to be held, that young people will be forced into this or that school, is of course absolutely at variance with the American theory of democracy. One restriction will always exist, as it has always existed, namely, that a person found disqualified by nature or early training to reach a given minimum standard in an occupation will necessarily be deprived of further opportunity to train for that occupation. This restriction now exists in all professional vocational schools. Furthermore, subject to general social conditions of developing industries and opportunities for free competition of merit, particular vocational schools will not train more persons than there is a reasonable demand for,—this principle finally to be interpreted, however, in terms of the more general requirement that every young person shall be given opportunity to train for some field of work. Finally, the principle of compulsory commitment to some form of vocational school will only apply to that minority of individuals who are otherwise unable to adjust themselves, because of broken homes, or innate incorrigibility to the minimum requirements of decent self-support. The principle of compulsory vocational education for young vagrants and incorrigibles has long ago been accepted, as is witnessed by the fact that prisons for juvenile offenders, which were once called houses of refuge and later reform schools, have come to be known as industrial schools, both in America and England. Society cannot afford not to require that every person shall have vocational training—voluntarily, if he will, and this will include always perhaps 95 or even 99 per cent. of all, or compulsorily, if he must.

It is becoming clearly evident that the problems of vocational education are to be solved only by the State and private economic agencies working in active co-operation. In any given field, employers, employes, and representatives of the public must be brought into active co-operation in constructive programs which take full acount of the welfare of the individual involved, as well as of society. Obviously, no few simple formulas will suffice as a basis for a philosophy of vocational education. A wide range of adjustments according to the ages of learners, the occupations for which they are preparing, and local conditions as to industrial organization, must be given full consideration.

At the present time there are being defined certain of the problems which, in the course of the next few years, will demand careful attention, and as to which it is reasonable to expect in the near future at least partial solutions. Among these problems are:

(1) What can or shall be done in the way of creating opportunities for the vocational education of young people from 14 to 16 years of age?

In primitive societies, young persons were regarded as children until they attained substantially the age of 16, at which time initiation into the activities of adults took place. Even today, for a large proportion of our population, the age of 16 marks a substantial transition period from the attitudes and occupations appropriate to childhood, into those appropriate to adults. Apprenticeship for the skilled trades begins at 16. Workers under 16 years of age are regarded as children laborers, or juvenile workers. An increasing number of larger employers require that applicants shall have reached the age of 16. Our laws regarding hazardous industries imply special restrictions, both as to hours of labor and as to occupations that may be followed and tools that may be used, on persons under 16 years of age.

Again, by general agreement today the years up to 14 years of age are reserved wholly for general education. But for many young persons it is doubtful if the years from 14 to 16 can be further employed for general education with profit, at least until the means and methods of our general education are greatly improved. There can be little doubt that in American urban communities the moral, physical and intellectual development of many of our children is impaired through the lack of sufficient wholesome work of a concrete and practical nature between the ages of 9 and 14, and to a still greater degree between the ages of 14 and 16. The desirability of definite practical employment for young persons from 14 to 16 cannot be overestimated, although, as indicated above, there is an increasing disposition to deny workers between these ages opportunities to enter wage-earning employments and especially those constituting a gateway to trades and the better compensated pursuits.

Also, it is obvious that a State-supported vocational school for young persons from 14 to 16 is handicapped by the fact that its graduates will be able, as a rule, to enter only the lowest rounds of the industries for which they have been trained, and by the further fact that the difficulties of doing productive work of a genuinely educative nature are very great, indeed.

Many persons are now attracted to the idea of so-called "pre-vocational education" for this period, namely, a variety of practical activities of an educational nature designed, in the first place, to enable the learner to discover his particular talents, and to acquire, in the second place, a variety of practical and definite experience that might serve as a substantial basis for later specific training. At present the entire theory of pre-vocational education is most vague and uncertain, and the probabilities are that under the influence of academic leaders much public money will be spent in schemes of so-called "vocational training" that, in a last analysis, will be found to be comparatively futile, at least as contributions towards vocational efficiency, however much they may enrich general education.

(2) What shall constitute the vocational training of persons entering those highly sub-divided occupations in which, as a consequence of organization, the perfection of machinery, and the specialization of processes, productive work on the part of many workers consists merely of the frequent repetition of a few exceedingly simple processes?

It is a curious and interesting fact that in many of the fields of commerce, manufacture, mining and agriculture which are to-day, in America, in the most dynamic condition, specialization of processes has been carried so far as practically to nullify the older forms of trade training. In the manufacture of textile fabrics, automobiles, shoes, paper, lumber and lumber products, food products, jewelry, fire-arms, cars and locomotives, and many other things, all of which are rapidly evolving industries, the fields of employment of so-called "unskilled labor" are large, and apparently growing, and this "unskilled labor" is in reality specialized labor, often very expert or at least rapid on particular processes.

In many departments of printing, mining, agriculture, transportation and business the same conditions prevail. Perfection of mechanism, organization of practice on a larger scale and subdivision of process result in a condition where extreme specialization is possible, and where the worker very early, indeed, learns the entire technique of the stage assigned to him.

The moral, physical and intellectual effects of this specialized labor are as yet by no means clear. There are those who suspect that such specialization, long persisted in, warps and dwarfs the individuality of the worker, and that the loss thus occasioned more than offsets the increased productiveness of the highly organized productive process. My belief is that we have little or no reliable information on this point. Criticism of specialized work comes mostly from those who are apt to be influenced by sentimental considerations, and who have few sound standards based on experience. Nevertheless, we cannot escape the conclusion that the economic processes in society must not so operate as seriously to impair the development of large numbers of individuals. It may be, for example, that even though modern sub-division of industry should lead to maximum productiveness, nevertheless, society would eventually conclude that such high productivity is purchased at too great a cost in loss of human powers. I can conceive that society might eventually find it expedient to teach every person a craft or trade, even though it were clearly evident that the final place of many of the workers would be as specialists in sub-divided processes. Such a course might be taken primarily for the sake of the individual development resulting.

(3) What shall constitute the most effective training of those who are to serve as so-called "non-commissioned officers" in industry?

Wherever modern economic processes are organized on an extensive scale, the need of leadership of various grades becomes insistent. Heretofore, in most lines foremanship and other forms of leadership have resulted from selective operations within the industry itself. The most promising man, and usually one who has done much in the way of self-teaching, is selected to lead others. This process is, of course, unorganized and necessarily wasteful.

On the other hand, it seems exceedingly doubtful whether, for many kinds of leadership, vocational training can be begun in the early years, say from 14 to 18 or 19 years of age. It is suggested that in all probability various forms of foremanship will eventually be produced by the systematic further training of selected individuals from among all of those who have had an equal practical training during their earlier years. In other words, in a given occupation every boy entering at 14, or 16 or 17 years of age will be trained for the pursuit of the trade itself, and after he shall have manifested good ability in this field and shall have begun his wage-earning career, opportunities—by means of evening schools, short courses, and extension teaching—will be afforded those who seek promotion to responsible positions of leadership.

The fact that this is the third annual convention of The National Association of Corporation Schools is significant of the vitality of a movement which must be of profoundest interest to all educators. This association has as its paramount purpose what is essentially a restoration of the ancient responsibilities of industry for vocational education as an essential by-product of its activities. I have not the slightest doubt that, in many of our great industries, opportunities for vocational training in corporation schools are of the utmost importance and should be utilized in every possible way. Personally, I trust that private and public effort will co-operate to make the most of these corporation schools, and that in no instance will a destructive competition arise between the schools that they may establish and the schools that will be established exclusively under public control. (Applause.)

THE TOASTMASTER: The next speaker is a representative from our National Government and needs no introduction to any citizen of Massachusetts in so far as his reputation for championing education is concerned, and he needs no introduction to anyone outside of Massachusetts—Honorable Samuel E. Winslow.

ADDRESS

HONORABLE SAMUEL E. WINSLOW, Congressman

Mr. Toastmaster, ladies and gentlemen, it is a great pleasure for me to have an opportunity to address so many of you who, like myself, apparently do not know enough to go home. (Laughter.) You have nothing on me in the effort you have been making to keep awake through these various long speeches on scientific subjects. (Laughter.) The only difference being that you are staying as a matter of choice or courtesy, whereas I am not actuated by either motive. (Laughter.)

The Norton Company and the American Steel & Wire Company, employers of a large percentage of my constituency, said to me, "Even if it is not getting near to your election time now we want you to come over and speak at our banquet next week." (Laughter.) If I had not fallen for that polite intimidation I would have left here an hour ago, but as I like my political job I have considered it wise for me to stay till now.

I feel a good deal like an old gentleman of seventy-five years, who was here not long ago. He was delivering some good advice to the coming generation. He said that for fifty years he had never gone to bed on the same day he got up for fear of missing something. (Laughter.) I don't know exactly how you feel about it, but I think from the way you are coming up to the light-heartedness of this speech that you would not mind if I didn't suggest any ponderous idea which you would be expected to take home with you. Inasmuch as my effort is to please and to help digestion I shall not try to give you much to take home.

I have been interested in the proceedings of this meeting and the speeches, and I am sure these highly educated specialists to whom we have been listening for the last two and a half hours have been very edifying. Among the speakers here is one who has travelled up and down this neighborhood with me for some years. He has had his innings on one night and I on another—the gentleman who was called upon to speak early in the evening, ex-Mayor, the Honorable James Logan. Mr. Logan, whenever I spoke first at one of these affairs, has had one on me, and as I owe him one now I am going to give it back to him tonight. (Laughter.)

He gave you a sermon, or as near one as a man would dare to give in a meeting of this kind, on a subject which might be treated say on the text of "Love One Another." (Laughter.) Now to the strangers who come here that signifies nothing, but to me it is perfectly clear why he chose that subject and why he believes in it. He didn't say a thing that was not true from his viewpoint. I know the Worcester people will understand it in a moment if they don't already. I heard him speak on this business of the by-product of love, and all there was to that. He ramified it in every direction, but you people want to bear in mind, you good friends from abroad, that he could not help it, for it was from force of habit that he associated efficiency with love. He is in the envelope business, of which ninety-two per cent. of the employes are girls. (Laughter.)

It is not strange, really, that I am here, aside from the misfortune of the business of being a public official. I have made a mark in the history of the United States Congress in a line closely identified with the scientific, the engineering, and that high degree of educational development which part of your speakers approved of tonight and part did not. (Laughter.) It all comes about in this way: When I went to Washington I naturally had the ambition of every new man in Congress to get on a good committee, and so I went around among the old fellows and asked how to do the trick. They told me the best thing to do was to go up to the leader of my side and tell him I was actually there for one thing, and that I would be willing to take a good committee, and so forth and so on, and they said on the whole just get around in front of the leader who makes up the committees, and let him look you over and size you up, and he will put you on the committee that he thinks you are best fitted to fill. And what do you think I drew? (Laughter.) Committee on Weights and Measures! (Laughter.) That brought me the responsibility, on the one hand, of helping to determine, after hours of serious hearing and debate, the size of a cranberry barrel, and on the other hand brought me in direct contact with the Bureau of Standards. And so, because of the latter association, I claim I should be regarded as connected with scientific affairs for the fit advancement of which we want to educate specifically all our young men so that they may not only become good citizens but also, incidentally, accomplish that other thing which has been so beautifully ignored here, namely, help make more money for ourselves—their benefactors. (Laughter.)

An English engineering expert told me one day—and I think this may appeal to a few of you people who are interested in such matters—that, in behalf of an English syndicate, he called to England a Mexican who had to do with an engineering problem in Mexico. The Englishmen took him to Liverpool and duly into a big power house there and showed him an enormous engine, calling his attention particularly to a great fly wheel which was running very fast. The leader of the party finally said to him, "I want you to note that wheel. Why, that wheel makes 1,500 revolutions a minute." The Mexican looked at it a little while and then said, "I don't' think so much of that, we make more than that down in Mexico." (Laughter.) For some of you good friends we will have cream on that story in the morning for your breakfast. (Tremendous laughter.)

I looked over some twenty-five or so addresses more or less appropriate to this occasion on receipt of your committee's invitation to me to speak tonight. The local committee asked me to prepare and submit manuscript on a definite subject, but I do not think they expected me to deliver it for the reason that when they asked me for a manuscript for the newspapers and were refused they did not press it. It was perfectly apparent to my mind that they realized it would be anywhere around 12 o'clock g. m. when they got to me and that I wouldn't have the nerve to get up and make a speech like that made by the Doctor here. (Laughter.)

The committee, with a modesty characteristic of the energetic men of Worcester, at the request of the toastmaster here told me they would like to have me make a few pointed and brief remarks on the subject of "The Attitude of the Federal Government Towards Vocational Education." I remembered sitting through a week or two of that discussion a while ago in Congress, and it occurred to me it might be something of a subject to look up for one who did not have a thorough technical education. And so as a starter on my investigation I had a bright idea and sent down to Washington for a few speeches on the subject. Three days after I had a notice from the Worcester Post Office that two sacks of mail had arrived for me. On opening it I found they were full of documents of discussions, etc., on this vocational subject representing something like 37,000 pages of manuscript. I promptly gave up the idea of trying to cover the subject thoroughly and technically. (Laughter.) But I can say to you that during the arguments made before the National House of Representatives I made up my mind that it was a very big subject with many angles.

The only suggestion I will take time to make now to those of you who are so actively and so earnestly interested in it is this: That when the time comes, when the Federal Government is to be urged by its constituent influences—proper influences, by the way (laughter)—you want to bear in mind that this is a big country, embodying many conditions of affairs and all conditions of people. We must realize that the country runs away down into the Southwest and runs away up to Canada on the Northeast, and it is almost beyond one to realize the varying occupations of the people, their environment, their education and all that there is to be said about those different things. What a great chance there is for an honest difference of opinion! So then, when you get on a subject of broad non-partisan interest, such as this, we are liable to have expressions of opinion so much at variance with one another at the outset as to make us think it impossible ever to come to a final conclusion which would result in drafting a proper bill, and one to meet the support of enough members of Congress to insure passage. One end of the country wants something pertaining to agriculture and another end wants something pertaining to manufacture, another wants something pertaining to mining. The fellow coming from the agricultural district does not see why there should be an exception made of his constituent and that the favors should be all extended in concrete instances to those that are in the manufacturing lines, and then the people in manufacturing lines and those interested in that part of the country where their constituents are the manufacturers feel that if they are not given special consideration that their representatives should vote against the bill and so it goes from one interest to another from one part of the country to the other, from the East to the West, from the North and the South. And as the discussion goes first on the agricultural bill which we must listen to, and then to another subject, and then on another, the members do not agree merely because we do not see it the same way. Thus you people who are interested in the immediate future may not see any satisfactory and comprehensive Federal action taken on your pet subject for a number of years. I believe, however, the country is taking up the education on vocational lines with great earnestness, and I feel perfectly sure that in a little while—not tomorrow or next year, but in a little while—as information is disseminated throughout the country, that the United States as a whole will realize that that is a proper part of the education of the young people. But I want to remind you that whatever is done by the National Government in that line will have to be done so that it will help equally the various industries and various callings throughout the country: in one part of the country one thing, in another part another, so that all of the people may receive an equal benefit or there may never be any good legislation passed through Congress.

Unlike my brother Norton, whom I have heard make some dubious utterances on the subject of vocational education of our young people, I believe the United States, through the National Congress at Washington, will look with favor upon such legislation and such appropriations as will tend to advance the practical, bread-winning, homely qualifications of the young people if it can only be brought home in such a way that it will mean just that to the coming generation. By the time that we get well started on this scheme, and begin to formulate something fairly well matured in our minds we will be met by this efficiency problem—which, by the way, bobs up everlastingly—and we will be shown that we have been all wrong. That will not be this year or next year, but by the time that we get our fundamental structure into shape where a majority can agree on it. As for myself I am pleased to welcome our manufacturers and those who are representing corporations in their efforts to solve this problem. By the time that we reach the point at which we may be agreed, I trust the masses of our people, and particularly our voters, will come to know and realize that the great corporation is not of necessity, by virtue of its size, an enemy of all mankind. We have had a lot of demagoguery about that, and we have had a lot of honest opinion to the same effect.

I think there is no one who ever had anything to do with the employment of labor who does not realize that the time for the education of the masses of the people on real facts, not on buncombe, not with any endeavor to put something over on them, but on education on all essential facts, on all the elements that enter into business, is well at hand. Your work, if carried on generously as now undertaken, is most promising of splendid results and most worthy of encouragement. (Applause.)

THE TOASTMASTER: The next speaker is on the program for the same reason as several who have preceded him. He is an earnest worker in the great cause that our Congressman has so highly endorsed, Mr. Harry Tipper.

ADDRESS

MR. HARRY TIPPER

When I noticed, ladies and gentlemen, that there would be seven or eight speakers at this meeting, I thought there was very little sense of my speaking. After Mr. Logan finished I was sure there was no sense in it, and after the last speech I don't know how on earth I have the nerve to get up. I will not make a speech because it is too late and it is unnecessary. All of the texts which I had in mind have been taken away from me, but I want to add just one thing. We have been talking about what we called the "selfish end" of the movement, and then it was suggested in later sessions that we had a higher motive, and that we were not altogether selfish in this educational work. Tonight we have been discussing some of these higher motives.

All of my experience, all the information I can obtain, and all that I can learn by reading the experiences of business men that have come in contact with it have confirmed the opinion that there is no difference between industrial and ethical efficiency, there is no difference between the economic and the moral truth, that they are one and the same thing. The only reason we cannot see it is because our vision is too small. Anything that takes away from the social or the professional efficiency is taking away from the total service and profit of industry. We cannot do too much on the social and the moral side, we cannot do anything on that side which will hurt the business efficiency, and we cannot do too much to help the moral efficiency as we go along. We will only accomplish the whole efficiency in industry when we accomplish the whole efficiency of the social and moral side. (Applause.)

THE TOASTMASTER: Now in closing just a word, perhaps of prophecy, from our next president, Mr. John McLeod. (Applause.)

ADDRESS

MR. JOHN McLEOD

Mr. Toastmaster, ladies and gentlemen, since I am the last speaker I am not surprised to find that everyone else has said exactly what I was going to say. Therefore I will do what the man did who spoke at a banquet which a friend of mine attended one evening not long ago. I asked my friend which speech he liked the most. He said, "I don't know, there was a little fellow got up over in the corner and I didn't hear a word he said, and he spoke for about half a minute." So since it is late and so much has been said I will make only a few brief remarks.

From the time the edict went forth to man that "In the sweat of thy face shalt thou eat bread," it has been the call of necessity that has been the spur to human effort. From the early dawn of civilization mankind has been attempting to avoid the responsibility wrapped in the correct answer to that question, "Am I my brother's keeper?" The correct answer we all have received, when we have listened to the still, small voice of conscience. I have said the call of necessity has been the spur to human effort. Necessity calls with a loud voice—we hear it and with it so often comes the voice of selfishness. Some things have been imperfectly done, but as the world grows older and in spite of the terrible things that are going on around us today, we can see many evidences that we are awakening to the call of conscience and are also listening to the voice of wisdom.

The voice of wisdom is telling us that we must develop and take care of the human as well as the material side of our affairs. It is telling us that the human side is the most important side to develop and that if this development is properly taken care of, the material side will almost take care of itself.

When men and women are called by necessity to do definite things, they generally respond to the call and attempt to make answer. Necessity has been calling to us for many years to take a greater interest in the human side of life, assuring us that if we heed her call, the material side can be expected to be more intelligently taken care of and the sum total of human happiness increased by an amount which will be in direct ratio to our efforts. Many men and women have been responding to this call for many years and have done much in their attempt to make answer. This call has come to those who are responsible for results from material things that are obtained from human effort. They are listening to this call and are becoming more convinced than ever before that they should develop the human with care and consideration in order that the greatest amount of material and spiritual happiness be obtained for themselves and those they represent.

Much has been said recently about trade and commerce and we have noticed it has been a common theory that the synonym is "exchange." We can also notice that the verdict is common among real men and women that "exchange" can only continue when it is made on a fair and honest basis and produces satisfactory results for both parties interested.

What is true of the exchange of material things—that thing we call "trade"—is also true of the exchange of human effort for compensation and appreciation. When this exchange is fairly and honestly made we obtain that thing we most desire and are working for—namely, co-operation. Appreciation should go hand in hand with compensation. I have heard employers of men tell with apparent pride how they have "called down" a subordinate. It seems to me at times the result might have been more satisfactory had they made some effort to lift him up. They might be surprised to find how great a percentage of men will respond to that kind of treatment and become more valuable assistants.

After having done those fair, those human things, that have obtained the co-operation desired, it has been found advisable to adjust the knowledge of principles obtained in schools to the work assigned to those we employ, and also to provide such schools for those who, through misfortune, have not received the education to which the youth of our land should be considered to be entitled, and which is so necessary to their success in life.

These and kindred educational movements are being carried on by firms and corporations throughout our land and have resulted in the necessity of forming this Association, "The National Association of Corporation Schools." We have a center for interchange of ideas. I do not know in whose brain the idea started, but I do know several of the gentlemen who have so successfully brought about its present success, and to those gentlemen I think we owe much.

We are almost through with the duties imposed by this, our third annual convention. The papers presented reflect great credit on their authors and have great value as foundations for the highways leading to the goal we so much desire to reach, and that is, the best adjustment of the human with the material side of life.

As one of the guests I want to thank our hosts for their share in the success of this convention, for having made the work to be done so comfortable in the doing, for making our play time so delightful, and for their great wisdom, good taste and judgment in having with us tonight the ladies, the graciousness of whose presence adds so much to the beauty of this occasion.

THE TOASTMASTER: Tomorrow morning at ten-fifteen there will be a business session after which our third annual convention will stand adjourned. Our next meeting will be in Pittsburgh, America's greatest industrial city.

BUSINESS MEETING

ELECTION OF OFFICERS
REPORTS
RESOLUTIONS

FRIDAY—MORNING SESSION

BUSINESS MEETING

FRIDAY MORNING, JUNE 11, 1915

PRESIDENT STEINMETZ, Presiding

THE CHAIRMAN: We herewith open the business meeting of the third annual convention of The National Association of Corporation Schools and request the report of the Nominating Committee.

MR. HENDERSCHOTT: Mr. Chairman, Mr. Kelley, chairman of this committee, was not able to be here this morning and has asked me to read this report. Under the constitution the report of the Nominating Committee is printed and sent to all Class A members forty days prior to the annual convention and election. The report reads as follows:

The Nominating Committee begs to report the following nominations for officers to be acted upon at the coming annual meeting:

For President—Mr. John McLeod, Carnegie Steel Company.

For First Vice-President—Mr. H. J. Tily, Strawbridge & Clothier.

For Second Vice-President—Mr. Harry Tipper, The Texas Company.

For members of the Executive Committee—Mr. J. W. L. Hale, Mr. L. L. Park, and Mr. W. D. Kelley.

JAMES HALLEY,
ARTHUR DILKS,
J. W. DIETZ,
W. D. KELLEY,
Nominating Committee.

I have the written approval of the above nominations by each member of the Nominating Committee.

Very truly yours,
WM. D. KELLEY,
Chairman Nominating Committee.

In Mr. Kelley's behalf I wish to say that he did not want to serve as chairman of the committee nor did he want to nominate himself, but the other members here insisted upon it and so he finally concluded to do so.

THE CHAIRMAN: You have heard the nominations and under the constitution any additional nomination may be made from the floor at this time. If not, then under the constitution, I request the secretary to cast one ballot for these officers. This being done I declare these officers elected to govern The National Association of Corporation Schools during the coming year. I congratulate you, Mr. McLeod (shaking hands with the new president).

I now ask for the report of the Committee on Resolutions and I wish to say here that a number of resolutions have been sent in to the Resolutions Committee dealing with the policy of the Association and its future actions. Such resolutions have been referred under the rules to the Executive Committee, and the president calls for only those resolutions dealing with matters being concluded at this convention. The resolutions dealing with the policies or future action of the institution will come before the Board of Directors and the President and will be taken up by them at the next meeting.

Any further resolutions which any member desires to make and which have not yet been sent in I would request be sent to the Secretary. He will bring them before the next meeting of the Board of Directors. Mr. Shaw, the chairman of the Committe on Resolutions, will now present his report.

MR. SHAW: We present for your action the following resolutions:

Whereas, The Norton Companies, the American Steel & Wire Company, and their employes have extended most gracious and extraordinary courtesies to the members and the guests of The National Association of Corporation Schools during this convention, be it resolved that we record our deep appreciation and thanks for the co-operation and help given by them to us collectively and individually during our stay in the city of Worcester.

Whereas, We have felt keenly the spirit of good fellowship, kindly interest and good-will extended to us during this convention, by the ladies of this progressive Association, the Worcester Chamber of Commerce, the Press of Worcester, the management of the Worcester Trade Schools, and the management of the Bancroft Hotel, be it resolved that we express this feeling by a vote of thanks and by recording it in the proceedings of our Third Annual Convention.

Resolved, That we record our great love and admiration for the great industrial leader, Dr. Charles P. Steinmetz, our esteemed retiring President, because of his painstaking efforts for the success of the Association during the past year, because of his deep interest in the great work of industrial education and progress for which The National Association of Corporation Schools stands, and because of his co-operative presence and advice at our Third Annual Convention.

Resolved, That we record our recognition of the unselfish manner in which our various committees and local Entertainment Committee have devoted their energies and enthusiasm to the work of organizing effort which has resulted in so much definite progress in the work of The National Association of Corporation Schools during the past year.

Whereas, Our executive secretary, Mr. F. C. Henderschott, has given to the work of The National Association of Corporation Schools his most earnest and loyal efforts for furthering its aims and purposes, be it resolved that we, as members of this Association, express to him our keen appreciation of his sturdy untiring zeal and to give him renewed energy in continuing this work, we pledge ourselves to give him our most earnest co-operation.

Respectfully submitted,

C. E. SHAW,
S. W. ASHE,
F. W. ATKIN.

In connection with the last recommendation it may be of interest to you, ladies and gentlemen, to note that Mr. Henderschott instructed the Resolutions Committee that the resolution usually put in, relating to retiring members, should be cut out, and that we should not introduce that resolution. However, we have disregarded his wishes in that matter and we have incorporated it in the resolutions.

THE CHAIRMAN: You have heard the resolutions moved by the Resolutions Committee and I ask you what you desire to do with them.

(Moved and seconded that they be approved.)

It has been moved and seconded that the resolutions be approved and I suppose spread on the minutes. Is there any discussion?

(Adopted by a rising vote.)

The next on our order of business is unfinished business. Is there any unfinished business? Was there anything that was laid over during the last convention that would come now under unfinished business?

Any new business which anyone desires to bring up?

MR. HENDERSCHOTT: I have here a letter and a set of resolutions which I will read at this time.

June 9th, 1915.

Mr. H. S. McCormack, President,
The Business Bourse,
261 Broadway, New York City.

Dear Sir: At a special meeting of the Executive Committee of The National Association of Corporation Schools, held at 12:15 today, a certain circular issued by the Business Bourse was presented, and in the judgment of the Executive Committee this circular violates the confidence placed by our Association in the membership of the Business Bourse. It seems an effort to capitalize the procedures of our Association.

As the head of the Business Bourse you are therefore requested to appear at another meeting of the Executive Committee at 1:30 in the Secretary's office, off the lobby of the hotel, for the purpose of making any statement which you may care to make to the Executive Committee on behalf of the Business Bourse, before the Executive Committee takes final action in this matter.

Yours very truly,
THE NATIONAL ASSOCIATION OF CORPORATION SCHOOLS.
By
F. C. HENDERSCHOTT,
Executive Secretary.

Before his appearance this resolution had been introduced in the Executive Committee, moved and seconded and laid on the table until he could appear and present such facts to the committee as he might wish, or make any statement which he desired to make. The resolution reads as follows:

Whereas, Because of the action of the Business Bourse Int., Inc., in issuing a circular and reprinting title page and inside back cover page from the *Monthly Bulletin* of January, 1915, issued by our Association, and whereas the Executive Committee considers this action as improper advertising and an attempt

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